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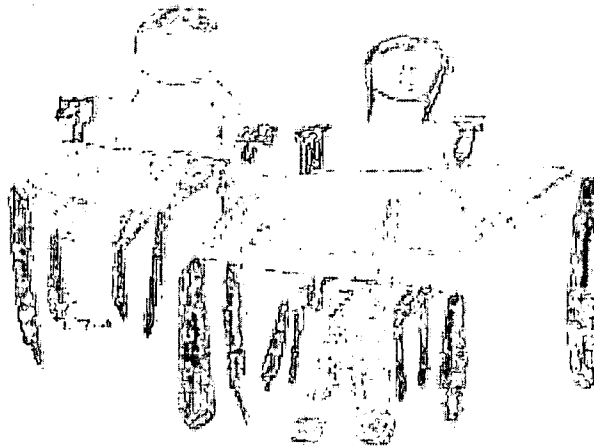
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ABSTRACT

In order to examine the responsiveness of federal policies to the known risk and protective factors for academic and behavior problems at the beginning of school, the Child Mental Health Foundations and Agencies Network commissioned the two papers that make up this publication. One paper reviews the last two decades of relevant scientific literature concerning the risk factors known to affect young children's social-emotional school readiness adversely and the gaps that exist in the research base. The other paper identifies the federal policies and programs that address these risk factors. Taken together, the two papers identify the gaps between what we know regarding risk and protective factors and the programs that are currently implemented to address them. Includes extensive references and data tables. (Author/SG)

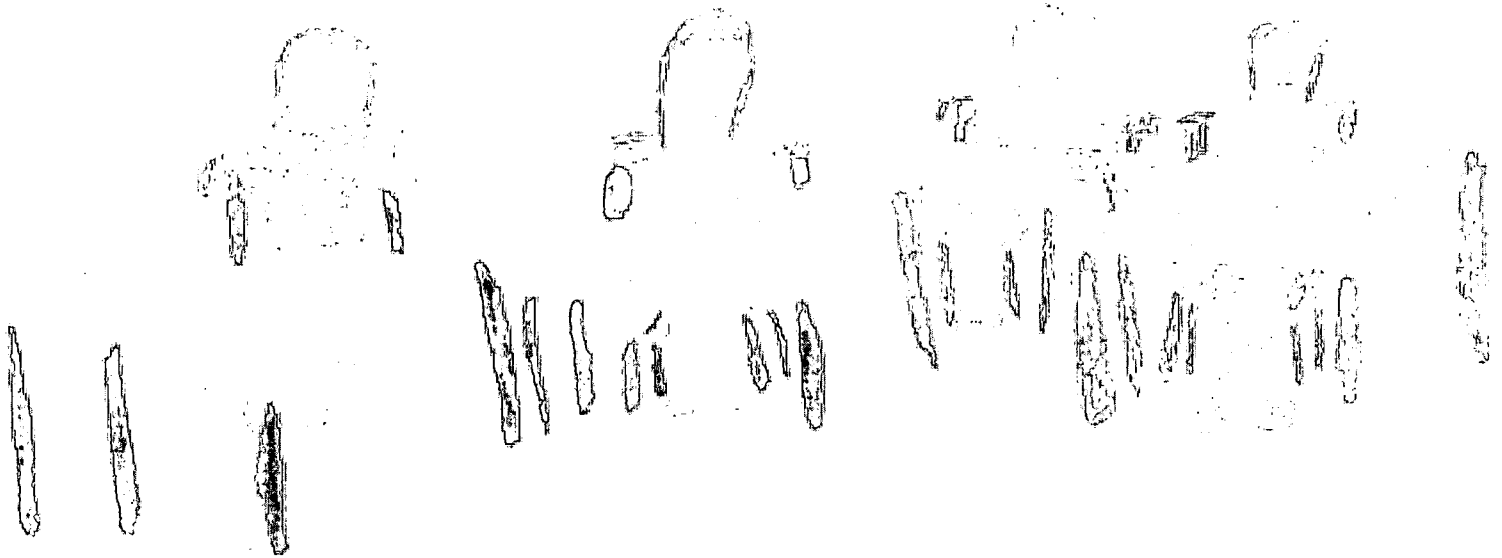
Off to a Good Start



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Off to a Good Start

Research on the Risk Factors for
Early School Problems
and
Selected Federal Policies
Affecting Children's Social
and Emotional Development and
Their Readiness for School

by

Lynne C. Huffman, Sarah L. Mehlinger, and Amy S. Kerivan

and

Doreen A. Cavanaugh, John Lippitt, and Otrude Moyo

Commissioned by



THE CHILD MENTAL HEALTH
FOUNDATIONS *and* AGENCIES NETWORK

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Preface

Social transitions, such as starting school, represent essential developmental points that move children toward divergent health and adjustment outcomes. Children who do not manage the first years of elementary school smoothly have greater problems with later behavioral, emotional, academic, and social adaptation. Research clearly documents the predictive power of cognitive impairment and neurodevelopmental disabilities for later academic failure. We suggest, however, that behavioral and social risk factors appear to be important predictors of poor school outcome as well. Medical care, early childhood care and education, child protection, and behavioral health systems play important roles in the identification, evaluation, and treatment of children with problems that emerge prior to and during the early school years. A shared goal for these systems is early identification and intervention—describing and assisting the 'at-risk' child and his or her family, thereby eliminating or reducing academic and behavioral difficulties during the beginning of school. Far-reaching achievement of such goals can be facilitated by the establishment, implementation, and monitoring of appropriate federal and state policies.

To examine the responsiveness of federal policies to the known risk and protective factors for academic and behavioral problems at the beginning of school, the Child Mental Health Foundations and Agencies Network, a group composed of representatives from the federal government and national foundations, commissioned the two companion papers included in this volume.

The first paper, "Risk Factors for Academic and Behavioral Problems at the Beginning of School" (Huffman, Mehlinger, and Kerivan), reviews the last two decades of relevant scientific literature in order to identify risk factors associated with problems during entry into school. OVID Medline and Internet GratefulMed literature searches were done, using search terms of "school entry," "kindergarten," "nursery schools," "special education," "transition to school," as well as "risk," "protective," and "intervention." The search yielded articles published between 1980 and 1998, and was limited by age (0–17 years), document (journal articles only, including review, theoretical, and commentary articles), and language (published in English). Within this set of articles, particular attention was paid to behavioral and social risk factors examined via longitudinal designs. A longitudinal approach allowed the consideration of causal risk factors for a defined set of outcomes in kindergarten and first grade (approximate ages 5–7 years). Risk factors as well as protective factors were described at individual, family and peer, neighborhood and community, and sociocultural levels. Salient outcomes included impaired language, motor, and social capacities, special education status, grade retention, behavioral problems, and learning disabilities.

Both basic and intervention studies indicate that risk for children's problems during early elementary school is associated with several identified factors (e.g.,

low birth weight, low IQ, early behavior and relationship problems, and low socioeconomic status). Multiple risk factors place children at greater than chance odds of failing as they begin school; this suggests that early interventions must be broadly based and not merely directed at a single target risk factor. Fewer studies have focused on protective factors—those factors associated with improved outcomes for at-risk groups of children.

The use of rigorous criteria to identify causal risk and protective factors can improve the predictive power of future research. In addition, an adequate understanding of the scientific literature on risk is critical for building more evidence-based policies that have the potential to affect the lives of large numbers of children. With increasing national attention to the needs of children and given accelerated knowledge in the basic neurosciences about developmental neural plasticity, a review of the scientific literature on risk for problems in early school years vis a vis federal policies was timely.

The second paper, entitled “Resource Guide to Selected Federal Policies Affecting Children’s Social and Emotional Development and Their Readiness for School” (Cavanaugh, Lippitt, and Moyo), identifies selected federal policies that address the identified risk factors in Huffman, et al. Federal policies are examined in five domains: child health, early childhood care and education, family support and child welfare, child nutrition, and socioeconomic status.

This review found that the federal government is making a major contribution to the emotional and behavioral health of young children and their families through Medicaid expansions, the passage of the State Child Health Insurance Program, and demonstration programs such as Starting Early Starting Smart. While some federal policies are complementary, many overlap, illustrating both the complexity of collaborative efforts on the part of the federal agencies and the diversity of partnerships supporting the behavioral and emotional health of young children. Current changes in the organization and financing of health care delivery, coupled with the complex interaction of federal policies that address young children, affect the efficiency and effectiveness of federal policy responses to the identified risk factors.

Emotional and behavioral health care for young children cuts across a number of disciplines. The multiplicity of federal agencies addressing similar concerns creates fragmentation of resources and engenders difficulty in coordinating efforts to ensure that all young children’s emotional and behavioral health needs are met. Equally significant are the gaps in federal policy and the inadequacy of federal programs to reach all young children.

A seamless, multidisciplinary system of early childhood care that transcends traditional federal policy boundaries must be designed and implemented. Research is needed on new models for organizing, financing, and delivering behavioral health care for young children, and efforts must be made to translate research findings into practice.

In our shared professional experience, the focus on young children and their families has never been greater. The mental health and emotional development of children have received the attention of the president, the vice president, and

their wives. The White House Conference on Mental Health included an acknowledgement that the emotional development and mental health of children are directly affected by early childhood experiences. Child development and early childhood educational experts have asserted the importance of young children's relationships with significant adults for some time; advances in neuroscience and infant brain development now provide additional explanation and support for these conclusions.

Numerous reports on these issues have been written in the past, yet the problems persist. The current opportunity to implement a comprehensive early childhood policy should not be missed. It is essential to build on past efforts and to identify champions in the highest levels of government, philanthropy, and business. Leaders in the social and medical sciences must join those in other sectors of society to emphasize the importance of early childhood experience on future success both in education and in the workplace. Only with the commitment of resources from the broad range of involved agencies and foundations, and the collaboration of scientists with policy makers, can we hope to improve the chances for at-risk children to succeed as they begin school.

Doreen Cavanaugh and Lynne Huffman

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Abbreviations Used in This Book

ACF	Administration for Children and Families
ACYF	Administration on Children, Youth, and Families
ADHD	attention deficit/hyperactivity disorder
AFDC	Aid to Families with Dependent Children
AGI	Adjusted Gross Income
ANCOVA	analysis of covariance
ANOVA	analysis of variance
ASFA	Adoption and Safe Families Act
BBA	Balanced Budget Act
CACFP	Child and Adult Care Food Program
CAPTA	Child Abuse Prevention and Treatment Act
CBCL	Child Behavior Checklist
CCDBG	Child Care and Development Block Grant
CCDF	Child Care and Development Fund
CCDP	Comprehensive Child Development Program
CDA	Child Development Associate
CDF	Children's Defense Fund
CHIP	Children's Health Insurance Program
CISS	Community Integrated Services Systems Grants
CMHC	Community Mental Health Centers
CMHS	Center for Mental Health Services
CMHSBG	Community Mental Health Services Block Grant
CNS	central nervous system
CRT	complex reaction time
CSAT	Center for Substance Abuse Treatment
CSHCN	Children with Special Health Care Needs
CWLA	Child Welfare League of America
DCTC	Dependent Care Tax Credit
DDST	Denver Developmental Screening Test
DHHS	Department of Health and Human Services
DOE	Department of Education
ECCE	Early Childhood Care and Education
EITC	Earned Income Tax Credit
ELBW	extremely low birth weight
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment Program
ESEA	Elementary and Secondary Education Act
FACES	Family and Child Experiences Survey
FAN	Child Mental Health Foundations and Agencies Network
FAPE	Free Appropriate Public Education
FH	family history
FMLA	Family and Medical Leave Act
FPFSA	Family Preservation and Family Support Act
FPL	Federal Poverty Level
FY	Fiscal Year
GAO	General Accounting Office
GPRA	Government Performance and Results Act
HCFA	Health Care Financing Administration
HEDIS	Health Plan Employer Data and Information Set

HMO	Health Maintenance Organization
HRSA	Health Resources and Services Administration
IDEA	Individuals with Disabilities Education Act
IEP	Individual Education Plan
IFSP	Individualized Family Services Plan
IHDP	Infant Health and Development Program
INS	Immigration and Naturalization Service
IQ	intelligence quotient
IRS	Internal Revenue Service
JOBS	Job Opportunities and Basic Skills Training
LBW	low birth weight
LD	learning disability
LEA	Local Educational Authority
MANOVA	multiple analyses of variance
MCH	Maternal and Child Health
MCHB	Maternal and Child Health Bureau
MCHBG	Maternal and Child Health Block Grant
NAHSC	National Association of Homes and Services for Children
NASW	National Association of Social Workers
NCHCANI	National Clearinghouse on Child Abuse and Neglect Information
NEGP	National Education Goals Panel
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
OBRA	Omnibus Budget Reconciliation Act
OR	odds ratio
OSEP	Office of Special Education Programs
OSERS	Office of Special Education and Rehabilitative Services
PCCM	Primary Care Case Management
PKU	Phenylketonuria
PPO	Preferred Provider Organization
PRWORA	Personal Responsibility and Work Opportunity Reconciliation Act
RISC	Risk Index of School Capability
SAPTBG	Substance Abuse Prevention and Treatment Block Grant
SAMHSA	Substance Abuse and Mental Health Services Administration
SD	standard deviation
SES	socioeconomic status
SESS	Starting Early Starting Smart
SSA	Social Security Administration
SSBG	Social Services Block Grant
SSI	Supplemental Security Income
SPRANS	Special Projects of Regional or National Significance
TANF	Temporary Assistance to Needy Families
TEFRA	Tax Equity and Fiscal Responsibility Act
VLBW	very low birth weight
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children
WISC	Wechsler Intelligence Scale for Children
WISC-R	Wechsler Intelligence Scale for Children – Revised
WRAT	Wide-Range Achievement Test

Paper 1

Risk Factors for Academic and Behavioral Problems at the Beginning of School

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Introduction

The beginning of school—kindergarten and first grade—is a critical period marked by a change in children's environment at a time when their cognitive and social capabilities also are changing. A child's readiness for school is an example of the connection between impressions of developmental processes and societal decisions about the optimal timing of entry into formal school environments (Barth and Parke 1993). Children's academic and social trajectories are formed in the early stages of public schooling. In first grade, as Entwisle has noted (Entwisle et al. 1987), children's work begins to be seriously evaluated in a comparative framework by teachers and classmates.

What kinds of important problems are identified during these early school years? Such problems fall into three arenas: (1) academic competence (e.g., impaired academic achievement marked by grade retention, low scores on early measures of scholastic performance, and identification of need for special education), (2) behavioral competence (e.g., behavioral problems that require intervention outside of the regular school class), and (3) social competence (e.g., problems with understanding complex social systems of classroom and school and difficulties negotiating new social relationships with teachers and peers).

What are the consequences of success or problems in these arenas? Improved academic performance and behavioral and social success early in school increase the likelihood that children will later be productive citizens, as measured by increased independence and social confidence, less reliance on social services, and higher earnings. On the other hand, poor performance in the beginning of school may imperil children, labeling them delayed learners and placing them into school tracking programs (e.g., within class ability grouping, retention in grade, or special education), decreasing the likelihood of positive social exchange and peer support, and emphasizing low expectations of parents and teachers for children's academic performance (Entwisle 1995). Children who are not successful early in school have greater problems with later behavioral, emotional, academic, and social development. For example, children who repeat a grade are at greater risk for several specific behavioral disorders, such as attention deficit hyperactivity disorder, obsessive compulsive disorder, over-anxious disorder, and major depressive disorder (Velez, Johnson, and Cohen 1989). Grade retention also predicts school dropouts and rapid, repeat adolescent pregnancies (Linares et al. 1991). Furthermore, children who demonstrate low scores on early measures of school achievement, verbal IQ, and verbal ability are at risk for delinquent and antisocial behavior (Yoshikawa 1995).

Educational, medical, child protection, and behavioral health institutions play multiple roles in the identification, evaluation, and treatment of at-risk children and their families. A primary goal is to intervene with children whose identified risk factors predispose them to disrupted learning. For example, it has been suggested that participation in a preschool enrichment program can increase school success and, consequently, decrease delinquency (Weikart and

Schweinhart 1991). Numerous intervention studies have been formulated on the premise that positive changes in school success may be followed by decreased antisocial behavior, while a difficult progression in the first years of school marks the beginning of a cascade of problems.

It is important to recognize the debate about whether or what aspects of school success are related to negative long-term outcomes. For example, it has been found that children with early reading difficulties have increased rates of conduct problems up to the age of 16 years. However, at least one study concludes that, when due allowance is made for potentially confounding factors (especially early conduct problems) and for factors correlated with these problems, it is unlikely that reading difficulties in early childhood directly relate to later adolescent conduct problems (Fergusson, Horwood, and Lynskey 1997). These results were true across various age and gender subgroups of the sample.

It also is important to understand the developmental competencies that characterize typical kindergartners and first graders and, concurrently, the cognitive, social, and behavioral demands that typify the early school experience. Such understanding will allow us to examine when the mismatch between individual developmental competency and environmental context puts a child at risk for getting off track in school. Levine and colleagues have proposed a theoretical model that highlights the interactions between neurodevelopmental functions and academic skills. At any point in time, a child lives with a "balance sheet" of strengths, adequacies, variations, and problems in neurodevelopmental functioning that may or may not be well suited to academic expectations (Levine et al. 1997). Table 1 summarizes this model as it applies to kindergartners and first graders. These constructs reflect lower order, higher order, and language-based as well as social cognitive functions.

Beyond basic neurodevelopmental functions, children's competency also seems to depend on social skills and emotion regulation capacities. During the first years of school, children begin to seek social acceptance, discover and emulate role models, reconcile personal and family beliefs with disparate values of others, explore autonomy, deal with targeted fears, and refine self-awareness (Levine 1999). Emerging emotional regulatory capacities during this transitional period include reinforcing, reciprocal, and collaborative behaviors; conflict resolution (without resorting to aggression); and the accurate conveyance and interpretation of one's own feelings as well as others' feelings (Levine 1999). Furthermore, children at this age are developing a sense of industry and productivity, which can promote a positive self-concept and sense of competence (Dworkin 1989). While these assumptions about socioemotional competence ring true, relatively few studies have examined early school outcomes such as self-concept, motivation, social competence, and family and peer relationships (Barnett and Escobar 1989).

The scientific bases for our understanding of risk and protective factors related to early school failure and success are found in the literature of multiple disciplines, including developmental psychology and psychopathology, child psychiatry, education, and behavioral and developmental pediatrics. Risk factors are those characteristics or variables that, when present in a disorder-free individual, indicate a greater likelihood that this individual, rather than someone

selected at random from the disorder-free population, will subsequently develop that disorder (Garmezy 1994; Werner 1992). Such risk factors will predict problematic outcomes, but may or may not be causally related to the onset or maintenance of problems. A typology of risk factors guided by and tied to social, clinical, and policy concerns (Kraemer et al. 1997) proposes that to show a characteristic as a risk factor requires a demonstration that the risk factor temporally precedes the adverse outcome and is correlated with it. A characteristic that cannot be shown to precede the outcome but is related to it is called a "correlate," not a risk factor. By definition, identified risk factors for a difficult transition into school are variables that predict early school failure, and may be causally related to the onset or continuation of emotional, social, and academic difficulties in school.¹

A major problem in the past literature is that correlates often are reported as "risk factors," and sometimes even as causal factors. To a great extent this has happened because of the emphasis in the past on cross-sectional or retrospective studies, neither of which can establish temporal precedence. Consequently, some of what are reported as risk factors for early school failure may be the symptoms or the outcomes of school failure, not risk factors at all. In Kraemer's typology of risk, she states that the term "risk factor" deserves greater specification (Kraemer et al. 1997). A risk factor may be a "fixed marker," that is, one that cannot be demonstrated to change. A risk factor may be a "variable marker," that is, one that can be demonstrated to change, but when changed, does not alter the probability of the outcome. Finally, a risk factor may be a "causal risk factor," that is, one that can be changed and, when changed, does alter the risk of the outcome. For example, a mother's not having graduated from high school is a risk factor for a child being labeled with a handicapped educational status in 1st grade (Finkelstein and Ramey 1980). However, awarding a diploma to a mother at the birth of her child ultimately will not change her child's educational trajectory; therefore, maternal possession of a high-school diploma is a variable marker for the child. Belonging to a disadvantaged minority group also is a risk factor for low academic achievement (Reynolds, Weissberg, and Kaspro 1992), but such membership cannot be changed and, therefore, minority status is a fixed marker. Lack of access to resources and inadequate parenting skills are correlated both with absence of maternal diploma and with minority group membership, and are themselves risk factors for low IQ. Providing high-quality childcare to infants and education to the mothers has been demonstrated to increase children's IQs (see IHDP intervention studies, Berlin et al. 1998). So, poor resources and poor parenting skills can be considered causal risk factors. As a result, in targeting future interventions to prevent low IQ and to promote academic competence in early school years, one might want to target the babies of mothers without a high-school diploma in disadvantaged minority groups (variable and fixed markers) for intervention, but the intervention itself should seek to change poor access to resources and parenting skills (causal risk factors).

Further, it is unlikely that any outcome in the arena of early school success or problems is the result of one and only one factor. Research focused on this arena must consider the issues around multiple risk factors. A transactional framework suggests there are several coexisting ecological levels (macrosystem

= cultural beliefs; exosystem = aspects of community; microsystem = family setting in which the child lives; ontogeny = within-individual factors) that contribute to a child's maladaptive or adaptive developmental outcome (Sameroff and Chandler 1975). In accord with this transactional model, risk factors present at one ecological level influence outcomes in surrounding levels, thereby determining the extent of risk posed to the individual (Cicchetti and Toth 1998). Therefore, a comprehensive approach to ascertain the combined effects of multiple risk factors and/or mechanisms by which such combined risk may have contributed to early school failure or success may be more fruitful than efforts to identify bivariate associations between one risk factor and one outcome.

Considerations of associations between variables point to yet another problem in the past literature: statistical significance is not sufficient to establish the clinical or policy impact of a risk factor (Kraemer et al. 1997). Many risk factors have been shown to be "statistically significant" when the sample size is large, but then never prove to have any clinical or policy significance. Some estimation of potency is needed, a measure of effect size that is interpretable in terms of clinical and policy significance (Kraemer et al., in review). In past literature, if a potency measure was selected (often the odds ratio or risk ratio), such selection was made in the absence of considerations of the nature of the population, outcome, or consequences of false positive and negative identification of children at risk. Overall, there has been limited attention in the literature on early school problems to the issue of potency of risk factors.

As noted above, the understanding of causal linkages among multiple risk factors and school requires that these relations be studied using longitudinal methodologies that assess family and child functioning prior to school entrance and continue to do so in the context of the school setting. Such research is relatively uncommon (Barth and Parke 1993; Cowan et al. 1993) and, despite the interdisciplinary interest in early grade failure, few large studies have investigated the social, emotional, cognitive, and health factors associated with this outcome. In one large study (Byrd and Weitzman 1994), interviews with parents of 9,996 children aged 7 to 17 who participated in the Child Health Supplement to the 1988 National Health Interview Survey were analyzed. The study revealed that, nationally, 7.6 percent of children repeat kindergarten or first grade. Factors independently associated with increased risk of grade retention were poverty, male gender, low maternal education, deafness, speech defects, low birth weight, enuresis, and exposure to household smoking. Behavior problems at the time of interview also seemed to be associated with prior early retention. High maternal education and residence with both biological parents at age 6 years appeared to be protective factors and were independently associated with a decreased risk of retention. While this study was strengthened by the size of the sample, most of the relations among the factors identified were correlative; again, longitudinal study is required to help ascertain whether such factors are causal risk factors.

Parallel to the advances in theoretical models and increasing precision in risk-factor terminology and research, Luthar has advocated for greater precision in the use of terms to label protective factors (Luthar 1993; Luthar, Cicchetti,

and Becker, in press). She suggests that attributes with direct ameliorative effects—operating in both high and low-risk conditions— should be labeled “protective.” Further, attributes conferring stability in competence despite increasing risk could be labeled “protective-stabilizing”; attributes conferring augmentation of competence could be labeled “protective-enhancing”; and attributes conferring advantages, although less under high-stress conditions, would be labeled “protective but reactive.” Scientific understanding of protective factors is substantially grounded in the exploration of child, family, and social environmental factors implicated in the concept of resilience, defined as “. . . a dynamic process encompassing positive adaptation within the context of significant adversity” (Luthar et al., in press).

Intervention programs are the vehicles by which our assumptions about risk and protective factors can be tested; they can elucidate the relation between intervention and a change in school performance. When specific risk factors have been identified for a given outcome, intervening, or experimentally manipulating the risk factor, allows the investigator/clinician/educator to prevent the onset of the condition, to decrease morbidity, or to effect a more benign course for the problem and its associated outcomes. The causal nature of the risk factor may then be demonstrated through intervention effect sizes. Greater knowledge of effects of specific risk factors on problematic school entry can allow the development of more effective preventive or treatment interventions, and lead to better understanding of the etiology of early behavioral and academic frailty. Thus, intervention studies based on knowledge about putative risk factors represent the current “gold standard” for establishing causal relationships between risk and outcome. Unfortunately, as the following review will indicate, there are not many of these studies in the literature.

This scientific review is a companion to “Resource Guide to Selected Federal Policies Affecting Children’s Social and Emotional Development and Their Readiness for School,” a paper by Doreen Cavanaugh, John Lippitt, and Otrude Moyo. In that paper, the authors discuss selected federal policies that purportedly address the factors identified in the following review, putting children at risk for problematic academic and socioemotional outcomes during the early years of school. Cavanaugh and colleagues present and discuss 23 policies, representing domains of child health, early childhood care and education, family and child welfare, socioeconomic status, and child nutrition.

Basic neuroscience research is expanding our understanding of the plasticity of a child’s developing brain. Concurrently, our national attention increasingly has been turned to the needs of children (e.g., the White House Conference on Mental Health, congressional attention to the problems of youth violence, and so on). To use our national resources effectively, it is critical that we link these areas of basic science and policy-making. An adequate understanding of the scientific literature on risk is important for building more evidence-based policies with the potential to affect thousands of children. Thus, a review of the scientific literature vis-à-vis federal policies is necessary and timely.

Methods

OVID Medline and Internet GratefulMed literature searches were completed, using search terms of "school entry," "kindergarten," "transition to school," "risk," "predictor," and "intervention." The search included articles published between 1986 and 1998, and was limited by age (child), document (journal articles plus review, theoretical, and commentary articles), and language (published in English). Utilizing these terms and limits, more than 500 articles were identified (see Table 2). This collection was supplemented with articles on pregnancy, cocaine, and alcohol that were identified using Biomed (a University of California search system). Within these articles, there were a number of identified risk (or protective) factors that were concluded to be related to the transition into elementary school, expressed as problems or competencies during kindergarten and first grade.² As in Sameroff's transactional model (Sameroff and Chandler 1975), such risk factors were conceived of at multiple levels; for example, individual ontogeny, microsystem (family, school, and peers), exosystem (neighborhood, socioeconomic status), and macrosystem (cultural beliefs and values).

There has been confusion in much of the extant literature about what are risk factors, including what are merely correlates, what are fixed and variable markers (informative but not a reasonable basis for structuring targeted interventions), and what are causal risk factors, which are vital to address in interventions. Risk factors may be found to be "statistically significant" but have no demonstrated clinical or policy value. In short, the field is still in its infancy, requiring much future thought and development.

However, the past and current literature is the best source of information to guide future research. To summarize and understand the scientific basis for our understanding of early school problems and risk, we examined those studies that satisfied the following minimal requirements of excellence:

1. Careful definition and sampling of a population free of the disorder at baseline
2. A longitudinal, prospective design
3. Definition and measurement of the putative risk factors at the baseline
4. Definition and measurement of outcomes at follow-up
5. Use of analytic strategies to establish statistically significant correlations between risk factors and outcomes

Studies satisfying these minimal requirements are listed in Table 3; if an article addressed risk processes or mechanisms of risk, that fact also is noted. Additional review and theoretical papers that addressed the issue of risk as related to early school failures or successes are listed in Table 4.

For each identified risk factor, we sought to identify intervention studies that addressed the relation between the risk factor and outcomes by attempting to change the level of risk. A second set of searches yielded articles concerning interventions designed to address the effects of recognized risk factors. For an in-

tervention study to be included in this summary, it needed to specifically address those outcomes for children in kindergarten and first grade, listed in Table 3 (e.g., early academic failure, grade retention, significant behavioral problems, and so forth). These searches focused on identifying original research (see Table 5); however, several review articles also were included (see Table 6). As noted previously, we considered a longitudinal design imperative for delineating causal relations among early risk factors, targeted or indicated interventions, and later outcomes.

In this review, we also noted if additional research or policy implications have been suggested by current studies of risk factors for difficult school transitions. Connections to policy-making may include (1) noting the ways in which policies are informed by research; (2) establishing whether there are certain levels or arenas of risk that have been well considered by policy-makers et al. that have not; and (3) identifying risk factors that deserve (by virtue of the breadth or intensity of their impact or by their malleability) additional consideration in the policy arena.

Results

Risk Factor Research

Risk and protective factors that affect *early* school success have been addressed to some degree in review papers published within the past 15 years (see table 4, e.g., Brier 1995; Lukeman and Melvin 1993; McLoyd 1998). While many of these reviews focused on school achievement and performance (e.g., Casey and Evans 1993; Ornstein et al. 1991; Richardson, Koller, and Katz 1986), fewer have addressed socioemotional outcomes (e.g., Lukeman and Melvin 1993; McLoyd 1998). Empirical papers describing particular risk and protective factors at various ecological levels are summarized below.

Individual Ontogeny

Low Birth Weight and Neurodevelopmental Delay (treated in most studies as a fixed marker).³ Research shows that children with an extremely low birth weight as babies have a higher incidence of behavior problems at school entry and poorer cognitive performance (McCormick et al. 1998; McCormick et al. 1993), as well as increased incidence of learning disabilities and academic difficulties (Hack et al. 1992). Having a very low birth weight or an extremely low birth weight places a child at risk for behavior problems, cognitive deficits, and school problems (enrollment in special education) at ages 7 to 8 years (Horwood, Mogridge, and Darlow 1998). However, heavier low birth weight babies do experience some catch-up and, by age 8, have nearly age-appropriate performance (McCarton, Wallace, and Bennett 1996). Additionally, prematurity has been demonstrated to be a risk factor for school problems or failure later in life (8 to 18 years) and for developmental problems at ages 2 and 5 years (Cohen 1995).

Abnormal neurodevelopment (as identified by a nurse during history-taking when a child is 4 years of age or by a school physician at the time of school entry) places children at risk for increased school behavioral problems (Cadman et al. 1988) and for higher rates of learning difficulties (Bax and Whitmore 1987) at the end of kindergarten or first grade. In one study, clumsy children who failed a standardized motor test battery at school entry were at increased risk for poor writing and delayed motor performance at age 8 (Roussounis, Gausson, and Stratton 1987). Another study found that children with low scores in kindergarten for right-handed coordination and overall graphesthesia on the Missouri Kindergarten Inventory of Developmental Skills displayed persistent soft signs at follow-up in first grade and were at greater risk for academic problems (Blondis, Snow, and Accardo 1990).

Other Medical Problems (fixed marker). Pregnancy problems, including maternal medical and emotional problems, have been identified as risk factors for offspring behavior problems in childhood and adolescence (Cohen et al. 1989). Research has also identified low neonatal thyroxine levels as a correlated indicator of neurological dysfunction at age 5 and of school failure at age 9 (Den Ouden et al. 1996). It also has been shown that neonatal hypothyroidism results

in increased grade retention, lower IQ at ages 4 and 7, and increased fine motor and coordination problems (Rochiccioli 1992). These findings suggest there may be very specific risk factors predicting developmental delays and consequent school failure. While such risk factors are unlikely to explain all neurological dysfunction or school failures, they nonetheless may mark a specific group of children at higher risk.

Psychophysiological Markers of Risk (variable markers). In a search for psychophysiological markers of risk, several studies show that slowed capacity to recognize and match a visual pattern (Complex Reaction Time, CRT) at age 7 correlates with problems in psychomotor and language development as well as with increased symptoms of aggression, hyperactivity, withdrawal, and an increased likelihood of school failure (Frisk 1991). These studies suggest that CRT is a biological marker that may identify, early in the school experience, children at higher risk for behavioral symptoms that contribute to school failure.

In a cross-sectional study, Porges and colleagues have suggested that heart rate variability is a sensitive psychophysiological index of mental effort and attentional processing in slightly older school age children (Suess, Porges, and Plude 1994). High baseline levels of heart rate variability are correlated with better performance on the first 3-minute block of a continuous performance task. While conclusions about causality cannot be drawn from this study, the findings suggest that heart rate variability might be useful as an indicator of attentional capacity, an individual trait that is increasingly critical as school-based education proceeds.

Cognitive Deficits (causal risk factor). Many papers confirm that cognitive ability or IQ accounts for a large proportion of the variance in academic competence and achievement (Finkelman, Ferrarese, and Garmezzy 1989; Pellegrini et al. 1987). Other reviews have examined in depth the contributions of cognitive factors to academic outcome, particularly when cognitive skills are affected by injury or illness, such as head injury (Dennis et al. 1998), chronic illness (Nokes 1996), epilepsy (Strang 1990), leukemia (Brown and Madan-Swain 1993), severe malnutrition (Grantham-McGregor 1995), prematurity (Wolke 1998), and neurofibromatosis (North et al. 1997). We do not attempt to readdress these large areas of research in this review. However, in our examination of those risk factors that reflect emotional, behavioral, and social domains and impact behavioral and social success in early school, we did consider those realms of research where cognitive ability is considered in conjunction with emotional state.

For example, affectively depressed children show evidence of functional cognitive impairment, with mild declines in verbal performance IQ over time (Kovacs and Goldston 1991). Depressed young children appear to be less socially adept than nondepressed peers; however, depression does not consistently impair social-cognitive abilities. Further, cognitive capacity allows a child to recognize and interpret emotion. Dennis and colleagues have established that understanding an emotion narrative involves recognition of affective valence and establishing an explicit mental representation of emotional states. In turn, this representation provides a mechanism that particularizes emotion and modulates its display, which then allows emotional expression to be modified

according to particular context. This understanding can be confused when cognitive processes are impaired, as in a head injury (Dennis et al. 1998).

There are studies of older children and adolescents that address the relation between cognitive deficits and poor school outcomes, both behavioral and academic (Brier 1995). These studies have shown that low levels of intelligence are related to delinquency, with IQ scores among delinquents an average of 8 points lower than the general population. Children with lower levels of intelligence, especially lower levels of verbal skills, are more likely to experience school failure, and/or to exhibit antisocial behaviors. Both poor verbal skills and antisocial behaviors are linked to lack of school success. These children also may have negative school attitudes, lowered self-expectations, and decreased chances of recognizing the relations between achievement in school and later success in life, further increasing the likelihood of poor academic achievement.

Not surprisingly, cognitive disabilities requiring special education during preschool appear to make the transition to kindergarten or alternative elementary school placement more difficult. In a theoretical paper, Fowler and colleagues suggest that this may be, in part, because children with disabilities lack the independence and survival skills required for elementary school. Fowler also suggests that the families of these children experience significantly more stress by the school transition than do families of able children (Fowler, Schwartz, and Atwater 1991). More specifically, in the domain of communication and language, Fazio and colleagues (Fazio, Naremore, and Connell 1996) demonstrate that language impairment leads to poor academic and language performance in school, although, in their study, the effects of poverty confounded this finding. The authors suggest that identifying language-impaired children for remedial help would be another way to allay school failure. Furthermore, there is strong evidence of high comorbidity of communication problems (speech, hearing, cognition) and emotional/behavioral difficulties in some young children; this may indirectly impact on early school success (Prizant, Wetherby, and Roberts 1993). Such evidence argues for establishing functional linkages between the behavioral health care system and those identifying and addressing communication disorders (speech/hearing/language specialists, health care providers, hospitals, clinics, preschools, schools, etc.). Nonfragmented services are warranted, in order to establish more comprehensive assessment and treatment planning practices.

Temperament and Personality Dimensions (fixed markers). Cross-sectional studies suggest that difficult temperament appears to increase risk for antisocial behavior and school failure (Brier 1995) and that easy temperament is a protective factor for behavior problems (Jackson and Frick 1998). With characteristics such as high activity level, inflexibility, impersistence, distractibility, and low attention, difficult temperament increases the probability that a child fails to adhere to classroom rules and follow academic instruction. These characteristics suggest a large overlap between difficult temperament and attention deficit hyperactivity disorder and, according to some authors (Hinshaw 1992), there is an overlap of more than fifty percent between attention deficit disorders and underachievement.

Tremblay and colleagues' study of French-Canadian boys of low socioeconomic status (SES) examined the correlations between the personality dimensions of im-

pulsivity, anxiety, and reward dependence and delinquency (Tremblay et al. 1994). Teachers rated boys on personality scales at kindergarten age, and the boys themselves reported their delinquency between the ages of 11 and 13. Tremblay and colleagues found that low SES boys with high impulsivity, low anxiety, and low reward dependence are most at risk for antisocial behavior and have the highest rates of self-reported delinquency.

In a study of sons of substance-abusing and normal fathers, it was found that (1) sons' IQ and positive temperament each partially mediate the effects of paternal substance abuse on sons' reading achievement scores and (2) that sons' positive temperament mediate the relations between family dysfunction and their reading achievement scores (Blackson 1995). As reading achievement is pivotal to academic success and school failure is associated with early age substance use, the author concludes that it is important to identify processes that promote academic success.

Many studies have concentrated on the effects of risk factors on adolescent school failure and antisocial behavior (Farrington 1989; White et al. 1994). Some studies show the relations between early childhood experience and later negative adolescent outcome with respect to low-level intelligence, negative school attitude, harmful peer influences, poor parenting techniques, and difficult temperament (see review by Brier, 1995). It is likely that indications of potential for school failure and antisocial behavior are evident during school entry age. More research is required to elucidate the effect of such risk factors on children during their transition into elementary school.

Aber and colleagues have proposed that effectance motivation, which is the intrinsic desire to deal competently with one's environment, is an important factor related to children's ability to adapt to school, frequently a first major out-of-home environment (Aber et al. 1989). In another study, inner-city Head Start children score higher on measures of effectance motivation than do their inner-city, non-Head Start counterparts; however, their levels are lower than those of the middle-class children (Malakoff, Underhill, and Zigler 1998).

Early Behavior and Adjustment Problems (causal risk factors). Research shows that mothers' high ratings of hyperactivity and externalizing behaviors for their 3-year-old children, predict adjustment difficulties at home, in school, and with peers at ages 6 and 9 (Campbell and Ewing 1990; Campbell et al. 1986). This research provides evidence of mothers' abilities to identify their children's problem behaviors. It also suggests a useful marker of risk for school failure. In a prospective study, Schwartz and colleagues investigated the predictive association between early behavior problems (internalizing, externalizing, hyperactivity-impulsiveness, immaturity-dependency) and later victimization in the peer group (Schwartz et al. 1999). Teacher ratings of the behavioral adjustment of 389 kindergartners and first-grade children (approximate ages 5 to 6 years) were obtained using standardized behavior problem checklists. These ratings predict peer nomination scores for victimization, obtained three years later, even after the prediction associated with concurrent behavior problems was statistically controlled. Further analyses suggested that the relation between early behavior problems and later victimization is mediated by peer rejection and

moderated by children's dyadic friendships. Behavioral problems appear to play an important role in determining victimization within the peer group, although the relevant pathways are complex and influenced by other aspects of children's social adjustment.

Age at School Entry (causal risk factor). Fowler found that boys' late birth-days (younger age) were associated with early grade failure (Fowler and Cross 1986); further risk was conferred by poor visual-motor integration, decreased maternal education, and positive family history of learning problems. In this study, protective factors seemed to be maternal education and lack of family learning problems. Similarly, Jones (1990) found that the proportions of students failing to meet standards on a reading achievement test in grades 1, 2, 3, and 6 are higher for younger, male, African-American, and "lunch-assisted" students than for older, female, non-African-American, and full-paying students. In contrast, Morrison, Griffith, and Alberts found that the age of a child at school entry (younger or older compared to other same-grade peers) was not a good predictor of risk for school failure, after controls for background variables were applied (Morrison, Griffith, and Alberts 1997). Additional research is required to account for contradictions in the conclusions of these studies.

Summary of Protective Factors. With the exception of "easy" temperament, which has been noted to be a protective factor related to the emergence of later behavior problems (Jackson and Frick 1998), few protective factors were specifically noted at the level of individual ontogeny.

Microsystems— Family and Peers

Family Composition (fixed markers). According to the U.S. Census Bureau, more than 50 percent of marriages end in divorce in the United States, and many of these divorces affect school-aged children. While children's responses to the change in family structure and lifestyle vary dramatically, studies show that divorce is associated with behavioral problems that may negatively influence success in school. Divorce also adds significant variance to socioeconomic predictors of cognitive-social competence and adaptive behaviors at school entry (Guidubaldi and Perry 1984).

School-aged children also experience parental remarriage. While some studies indicate protective effects, others show remarriage to be a risk factor when comparing step families to intact families. Pagani and colleagues (Pagani et al. 1997) conducted a longitudinal study in Quebec that followed children from 6 through 12 years of age. They found that divorce and remarriage are associated with higher levels of anxiety, aggression, hyperactivity, disobedience, and deviant behavior. Children who experienced parental divorce before the age of 9 were more anxious at age 12 than children from intact families. Children whose parents divorced before age 8 were more aggressive, and those whose parents divorced before age 6 were more disobedient and defiant. Hyperactivity was noticed only among children whose parents divorced prior to age 8. Pagani and colleagues also noted that remarriage seemed to have a protective effect regarding hyperactivity, especially during early childhood. Neither divorce nor remarriage appeared

to affect prosocial behavior. Marital status and family composition, then, may be an important factor in school success or failure. Future studies of family composition, as contributing to risk status, also should consider other moderating socioeconomic variables such as employment or educational status.

Low Level of Maternal Education (fixed marker). Lower levels of maternal education predict children's early grade failure, including a lack of reading and math achievement (Fowler and Cross 1986). Similarly, a lack of maternal education has been demonstrated to be a stronger predictor of handicapped status at school entry than the child's own behavior from birth to 3 years (Kochanek, Kabacoff, and Lipsitt 1990). Information available on birth certificates, including maternal level of education, can be used as an effective predictor of a child's need for special education services at public school entry (Ramey et al. 1978; Finkelstein and Ramey 1980). High maternal education and residence with both parents at age 6 decreases a child's risk of repeating kindergarten or first grade (Byrd, Weitzman, and Auinger 1997).

Parental Substance Abuse (treated in most studies as a fixed marker). Numerous studies have focused on the effects of maternal substance abuse during pregnancy as well as the influence of childhood exposure to addicted parents in the home environment. Most studies point to the adverse effect of parental substance abuse on the cognitive, physical (intrauterine growth retardation and low birth weight), and social development of young children (for bibliography, see Coles, Russell, and Schuetze 1995). Smoking during pregnancy, for example, is generally noted for its negative physical health consequences for infants. Other studies demonstrate that children exposed prenatally to maternal smoking have behavior problems at the age of school entry (McGee and Stanton 1994) as well as impulsivity and poor performance on a series of memory tests (Fried, Watkinson, and Gray 1992). Maternal alcohol consumption during pregnancy is associated with intrauterine growth retardation and low birth weight, which affects later cognitive and social development; a small percentage of children born to heavy drinkers suffer from fetal alcohol syndrome (FAS) (Streissguth et al. 1994). A study in West Berlin found that only 30 percent of teenagers with FAS had normal-range IQ scores and by the end of school, 55 percent had attended schools for the mentally handicapped (Spohr, Willms, and Steinhausen 1994). Alcohol-exposed children also have been found to have behavioral and social difficulties, such as trouble cooperating, paying attention, and problems with impulsivity and impersistence.

Studies of prenatal exposure to other drugs, such as cocaine, heroin, and amphetamines, also highlight problems in behavioral and cognitive development. Some studies suggest that children exposed to cocaine *in utero* have delayed mental development; for example, Bender's study showed that exposed children experience early language and nonverbal development problems throughout preschool years (Bender et al. 1995). In contrast, other studies show that prenatal exposure to cocaine does not affect intellectual ability or academic achievement, but teachers report children had difficulty sustaining attention (Richardson, Conroy, and Day 1996). Van Baar found that methadone, heroin, and polydrug exposure results in lower general intelligence and language tests

around school entry age (van Baar and de Graaff 1994). Further, children exposed to cocaine, heroin, and methadone are more active, have more behavior problems, and show less ego resilience, according to parent and teacher ratings at age of school entry (van Baar et al. 1994). At ages 4 and 8 years, children exposed prenatally to amphetamines are more aggressive and show poorer social adjustment (Eriksson and Zetterstrom 1994).

Because of related risk factors such as lower socioeconomic status, lower maternal age and increased parity, poor maternal nutrition and health (including HIV positivity and syphilis), and irregular or nonexistent prenatal care and increased genetic susceptibility, it is difficult to attribute developmental problems solely to *in utero* drug exposure. In addition, social problems such as financial and housing uncertainties and disturbed relations with families may have consequences for the child. Any of these confounding factors may enhance or sometimes mask the effects of maternal substance abuse. Still, parental substance abuse is a risk associated with adverse effects on cognitive, physical, and social development in children. Because exposed preschool children show signs of developmental delay (mostly in the areas of cognitive and social growth and maturity), their transition into school often is difficult. Children with lower levels of intelligence and other cognitive difficulties are at an increased risk for school failure; those with more behavior problems are also at risk and may have difficulty meeting the new demands of the classroom setting.

Problematic Maternal Relationship History (variable marker). In a prospective, longitudinal study by Pianta and colleagues, two groups of disadvantaged mothers and children were formed based on the stability of the mothers' primary social relationships (Pianta, Egeland, and Hyatt 1986). While chaotic relationship history goes hand in hand with environmental disorganization, lack of support, economic disadvantage, and stress, maternal relationship history appears to have value as a summary indicator or variable marker of risk status. Membership in the group of mothers with self-reported chaotic (that is, numerous and unstable) relationships predict maternal behavioral ratings for their 5^{1/2}-year-old sons of hyperactivity, depression, and delinquency. Membership in this group also predicts teacher ratings of aggressiveness, inattentiveness, and self-destructiveness.

Parental Psychopathology (causal risk factor). Researchers are beginning to collect information about the behavioral adjustment of young school-aged children of postnatally depressed mothers. Gross demonstrated that preschool children of depressed mothers have significantly more behavior problems and lower social competence than do children of nondepressed mothers (Gross et al. 1995), while Greenberg showed that maternal depression (among other environmental and behavioral risk factors) during a child's kindergarten year is predictive of child behavior and school achievement problems in first grade (Greenberg et al. 1999). In another longitudinal study, 5-year-old children of a community sample of postnatally depressed and well women were investigated through teacher-respondent questionnaires concerning the children's adjustment in the context of school after the children had finished their first term (Sinclair and Murray 1998). SES and child gender have the most powerful influ-

ence on adjustment; however, postnatal and recent maternal depression contribute additional predictive power for low SES boys.

Poor Parenting Practices (causal risk factor). Evidence shows that effective parents adjust their parenting behaviors in accordance with their developing child's needs. In one study, high rates of positive parent interaction with their children was a protective factor for their children's academic success (marked by math and reading achievement, conversation, vocabulary skill, and block design at age 6 years) (Coates and Lewis 1984). Furthermore, effective parental supervision has a protective effect and is a positive socializing factor that enhances prosocial behavior. In one study, the coping reactions of parents of 58 children exhibiting signs of maladjustment on entering elementary school and changes in adjustment to school were evaluated during the first two school years (Elizur 1986). The relationship between coping and adjustment was evaluated by measuring both synchronous and cross-lagged correlations. As the children's adjustment worsened during the first grade, mothers increased their coping activity, but their efforts did not contribute to an improved adjustment. An adaptive and cohesive family pattern, related to a subsequent improvement in adjustment to school, was composed of variables measuring fathers' coping activities, mothers' positive attempts to stimulate the fathers' coping behaviors, parental support of the children, and their cooperation in coordinating coping strategies.

In contrast, poor parenting techniques and harmful peer influences increase the risk of adverse developmental outcomes. Parents who are harsh, disengaged, provide inconsistent guidelines, and are unable to monitor their children's behavior are more likely to have children with a heightened risk for antisocial behavior (Brier 1995). In a study examining the effects of parenting styles, McFadyen-Ketchum found that mothers who used high levels of coercion and nonaffection with their preschool-aged sons were more likely to have boys with high and increasing aggression in kindergarten. Their daughters, on the other hand, showed high but decreasing aggression in kindergarten (McFadyen-Ketchum et al. 1996). Besides pointing to gender differences, this study provides information about the effects of parenting style on child aggression, an individual characteristic that seems to be a factor in determining school success or failure. In addition, Jacobvitz found that mothers who use intrusive, seductive, or overstimulating styles of care have children who are more likely to have hyperactivity and distractibility problems at school entry at ages 5 to 6 years (Jacobvitz et al. 1987). Egeland also found that intrusive parenting observed during mother-child feeding and play interactions at 6 months predicted academic social, emotional, and behavior problems in first and second grade (Egeland, Pianta, and O'Brien 1993). Finally, Cowan and colleagues (Cowan et al. 1994) have found that ineffective parenting, identified by low warmth and structuring, in the preschool period predicted shy behavior and low academic achievement in kindergarten.

Maltreatment (treated in most studies as a fixed marker). Increased concerns for the welfare and development of maltreated children are shaping new avenues for research. One such area of study has included the effects of maltreatment on a child's academic performance. In their discussion of this research arena, Eckenrode and colleagues noted that children who are maltreated

have higher rates of school problems than children who are not maltreated, including lower test scores in math and English, lower IQ scores, lower child-perceived social acceptance, increased absence from class, and more grade repetitions (Eckenrode et al. 1995). In general, much attention has been paid to the maltreatment of infants and preschoolers (Wodarski et al. 1990). Studies that have focused on academic performance as an outcome have primarily included older school-aged children and adolescents (Eckenrode et al. 1995; Kurtz et al. 1993; Kendall-Tackett and Eckenrode 1996; Wodarski et al. 1990). Additional research is necessary to establish the specific relations between maltreatment and success or failure in young school-aged children's management of the transition into elementary school. In addition, studies with a longitudinal design and with appropriate comparison groups also are necessary (Wodarski et al. 1990).

Insecure Attachment (variable marker). A few studies have explored the impact of early attachment relationships on later school success. In one study, insecurely attached kindergarten boys showed more problem behaviors, had more difficulties with peer relations, and were liked less by peers and teachers in first grade (Cohn 1990). In general, kindergartners who were securely attached in infancy performed better on IQ tests than did children who were insecurely attached as infants (van Ijzendoorn and van Vliet-Vissers 1988). This global finding was qualified in another study that demonstrated that day care appears to have a negative effect for secure children but has a positive influence for insecure children. For the secure group, children in day care are more negative and avoidant at 42 months, and they are more externalizing and aggressive in kindergarten compared to the home-reared group. In contrast, children in day care who were insecurely attached are less withdrawn. Overall, children in day care are rated higher on externalizing behavior in kindergarten than home-reared children, but no differences are found in the later school years (Egeland and Hiester 1995).

Difficulties with Peer Relationships (causal risk factor). Friendship affects children's development and adjustment. In addition to family members and teachers, friends have socializing influences that, according to Hartup (Hartup 1996), provide support for contextual emotional and cognitive learning and development. Friendships are models for later relationships. One recent study of kindergarten students who had best friends looked at several friendship processes and their effect on transition into elementary school, relationship outcomes, and adjustment outcomes (Ladd, Kochenderfer, and Coleman 1996). Ladd and colleagues found that lower levels of conflict and higher levels of validation and exclusivity result in more satisfactory and stable relationships; validation, in particular, is related to children's positive self-perception at school as well as positive perception of peer support. In contrast, conflict is a risk factor for poor school adjustment and decreasing school involvement, especially for boys. In another study, Ladd demonstrated that children who gain friends throughout kindergarten gain achievement as well; the fewer friends and more peer rejection a child has may negatively influence a child's perception of school, school attitude, and school achievement (Ladd 1990). Overall, friendship characteristics can have an adverse or positive effect on children's development and experience in early school environments.

Summary of Protective Factors. Jackson and Frick (Jackson and Frick 1998) have investigated the association between negative life events and protective factors in predicting the adaptive, emotional, and behavioral functioning of 140 school-age children. While this study did not examine 5 to 7-year outcomes, it did report that protective mechanisms in 8-year-olds could be considered in three categories: disposition characteristics (higher IQ, SES, and easier temperament), family environment (higher levels of positive relationships), and social support. Thus, for girls, as negative life events increased, social support and internal perceptions of control acted as protective factors to reduce exhibited internalizing behavior. A high level of maternal education has been established as protective in terms of the prediction of early grade retention (Byrd and Weitzman 1994). Further, it has been noted that residence with both parents (Byrd, Weitzman, and Auinger 1997) and parental remarriage after divorce (Pagani et al. 1997) seem to be protective effects. In addition, for children who begin to show patterns of maladjustment at school entry, cooperative parental coping yields a subsequent improvement in behavioral adjustment to school (Elizur 1986). Outside of the family, experience in day care appears to have a positive influence for insecurely attached children, with such children demonstrating fewer withdrawn behaviors in kindergarten (Egeland and Hiester 1995). In normally developing kindergartners, children with a larger number of classroom friends at school entry gain in school performance and develop more favorable school perceptions.

Microsystems— Day Care and School

Nonmaternal Care (variable marker). In a longitudinal study of nonmaternal care, Belsky (1999) found that more time in nonmaternal care during infancy and early childhood predicted more mother- and father-reported externalizing problems at age 5. However, the effects of nonmaternal care on externalizing problems became insignificant once observed parenting was controlled, thereby providing further evidence of the mediational effects of parenting. Degree of nonmaternal care also predicts more negative adjustment of affective-cognitive functioning at age 5 (including social problem solving); this effect was somewhat attenuated after controlling for parenting skills.

Characteristics of Kindergarten and First-Grade Classes (variable marker). In a large cross-sectional study of first-grade classes in the Netherlands ($n = 1162$), van den Oord (1999) examined children's psychosocial adjustment at school. School and classroom characteristics were considered as predictors, including sociodemographic characteristics, school facilities, class organization (e.g., class size, number of parent-teacher meetings during the year), and teacher-related variables. Social network indices (e.g., contact between pupils) also were considered as predictors. The author of this study found that positive interpersonal relations among students is related to fewer teacher-reported behavior problems and increases in children's feelings of well-being at school. No measures of psychosocial adjustment at school are predicted by school and classroom characteristics.

Relationships with Grade Teachers (causal risk factor). Ladd and his colleagues examined kindergartners' behavioral and social orientations (Birch and Ladd 1998). They found that early behavioral orientations are related to teacher-child relationship quality in a few specific ways. First, there are unique associations between children's early antisocial behavior and features of their first-grade teacher-child relationships (i.e., negative correlations with closeness, positive correlations with teacher-child conflict, and positive correlations with child dependency). Second, prosocial behavior is generally related to positive aspects of children's first-grade teacher-child relationships. Last, conflict in the teacher-child relationship predicts decreasing prosocial behavior as children adjust to first grade.

Further, Pianta, Steinberg, and Rollins (1995) established that, within a group of children at risk for retention in kindergarten, first grade, or second grade, those children with whom teachers shared a warm relationship, and with whom teachers could openly communicate about personal matters, are not retained. This finding corroborated conclusions from a number of studies suggesting that positive relationships with teachers are associated with better than expected or improved outcomes for both risk and nonrisk samples (e.g., Garmezy 1994; Pedersen, Faucher, and Eaton 1978; Werner and Smith 1980).

Summary of Protective Factors. Ladd and his colleagues have investigated the linkages between relational supports and children's school adjustment. For example, they have noted that boys whose parents tended to initiate peer contacts during preschool became better liked by peers, were more prosocial, and less withdrawn in kindergarten (Ladd and Hart 1992). Further, children with greater preschool experience tended to receive higher ratings from kindergarten teachers for academic behaviors and readiness (Ladd 1990). However, we were unable to find any studies that addressed these possible protective factors in children at risk for problems in early school years. Pianta's study of children at risk for early grade retention demonstrates that a child's warm and open relationship with his or her teacher is a protective factor and is associated with improved academic outcome (Pianta, Steinberg, and Rollins 1995).

Exosystems— Neighborhood, Community, and Socioeconomic Status

Immigrant Status (fixed marker). James has demonstrated that immigrant status is a predictor of increased risk of school failure as well as of psychosocial problems, drug use, and other risk-taking behaviors (James 1997). A wide range of factors may influence this finding, including language facility, degree of acculturation, level of socioeconomic status, level of family education, and/or family support.

Minority Status (fixed marker). Ethnicity, poverty, gender, and household composition have all been associated with indices of school-based competence among children. Being a male with minority ethnic status and being raised in single-parent, low-income homes is associated with higher rates of childhood behavior problems (Rutter 1983) and, except for gender, with lower academic achievement in the first two years of school (Alexander and Entwisle 1988). Be-

cause these risk factors are known to be interrelated, the assessment of the predictive value of any one factor, for example, minority status, must consider the effects of the others. In one large cross-sectional study of 868 black and white elementary school children, results showed that, although ethnicity is a strong predictor of academic achievement test scores, income and gender are better overall predictors of children's competence in conduct and peer relations domains than were ethnicity or household composition (i.e., single parent) (Patterson and Narrett 1990).

Low SES (treated as a fixed marker). Family SES and early language development are positively related to later language development, academic achievement, and school success. Children from higher SES families are exposed to a greater vocabulary in the home environment and have more early language experiences than children from lower SES families. This early advantage for children from high SES families continues into grade school (Walker et al. 1994). Thus, higher SES may be viewed as a factor that enhances school success.

Conversely, lower SES has a potentially negative effect on school achievement. In particular, persistent poverty has more detrimental effects on IQ, school achievement, and social-emotional functioning than does transient poverty, although children in both groups generally do worse than children who have never been poor (McLoyd 1998). Poverty negatively impacts school success, and the conditions of family poverty (e.g., long-term versus episodic) may be an important determinant for identifying children at risk. Infants and young children who live in poverty suffer higher levels of prematurity, infant mortality and morbidity, and subsequent developmental delay, behavioral problems, and inadequate preparation for school (Schorr 1988). One study shows that parental welfare status can be a significant predictor of poor school performance for girls (aged 6 to 11 years) and psychiatric disorder in boys (aged 6 to 11 years) (Offord, Boyle, and Jones 1987).

Dodge and colleagues also examined the observed relation between early socioeconomic status and later child behavior problems (Dodge, Pettit, and Bates 1994). A sample of 585 children ($n = 51$ from the lowest socioeconomic class) was followed from preschool to grade 3. Low socioeconomic status assessed in preschool significantly predicts teacher-rated externalizing problems and peer-rated aggressive behavior in kindergarten and grades 1, 2, and 3. Also, low socioeconomic status is significantly correlated with eight negative factors in the child's socialization and social context, including harsh discipline, lack of maternal warmth, exposure to aggressive adult models, maternal aggressive values, family life stressors, mother's lack of social support, peer group instability, and lack of cognitive stimulation. These factors, in turn, significantly predict teacher-rated externalizing problems and peer-nominated aggression and account for more than half of the total effect of socioeconomic status on these outcomes. These findings suggest that part of the effect of socioeconomic status on children's aggressive development may be mediated by status-related socializing experiences.

In a 10-year longitudinal study, Walker et al. (1994) found that early differences in family SES, child language production, and IQ were related to out-

comes in early elementary school. Differences in parenting behaviors (i.e., time, attention, talking) are associated with differences in child productive vocabulary between 7 to 36 months of age, and child IQ, favoring higher SES parents. Lower SES children were exposed less often than higher SES children to diverse vocabulary through their parents' attention and talking, and they were prohibited from talking more often. Further SES-related differences in child language prior to school are predictive of subsequent verbal ability, receptive and spoken language, and academic achievement assessed on standardized tests in kindergarten through grade 3. When combined with a composite SES indicator, early child language production significantly increases the variance accounted for in the prediction of elementary language and academic competencies in each subsequent year in elementary school.

Summary of Protective Factors. Protective effects of higher SES in reducing teacher- and peer-rated aggressive behavior in early school years has been documented; these may be mediated by status-related socializing experiences (Dodge, Pettit, and Bates 1994).

Macrosystems

Macrosystem issues might include overarching values about education, literacy, school success, or the level of community, state, or federal investment in pre-school care and education. Our review of the literature did not reveal any scientific studies addressing these issues as possible risk factors for problems in early school years.

Intervention Research

The employment of longitudinal study designs helps us establish the causal nature of certain risk factors. The evaluation of the effectiveness of interventions addressing these risk factors allows us to then substantiate the potency of the risk and also gives added weight to its consideration as a causal risk factor. When specific risk factors for early school problems are identified, an investigator can attempt to prevent the onset of school problems, to decrease the frequency or extent of academic or behavioral problems in school, or to effect a more benign course for school problems by an experimental intervention. An effective intervention represents a provisional adjustment of the identified risk, thus validating the risk factor as causal. Greater knowledge of effects of specific risk factors on problematic school entry should allow the development of more effective preventive or treatment interventions and lead to better understanding of the etiology of early behavioral and academic frailty. Ultimately, those effective interventions that are evidence-based are the ones that federal agencies may want states to consider and adopt.

Interventions can be designed at universal, selective (targeted), or indicated levels, with enormous social and ethical differences and policy implications (Gordon 1983). Bronfenbrenner suggests that these are the levels at which interventions operate within the "ecology of childhood" (Bronfenbrenner 1974). Our literature review focuses on interventions directed toward groups defined by risk; therefore, all noted interventions operate at the selective (targeted) level.

Several recently published review papers and texts also have addressed intervention studies in the specific arenas of low birth weight (Dudley et al. 1993; McCormick et al. 1998) and social disadvantage (Karoly et al. 1998; Yoshikawa, 1995).

Most of the interventions we reviewed were designed to address a specific "primary" risk factor, with some interventions also considering related or multiple risk factors. Thus, we chose to organize and summarize intervention research findings by primary risk factor.

Individual Ontogeny

Neurodevelopmental Delay, Low Birth Weight, and Other Medical Problems.

Certain interventions for low birth weight infants can increase school-related performance and reduce parent perception of behavior problems (McCormick et al. 1993; Berlin et al. 1998). Studies of the Infant Health and Development (IHDP) Project demonstrate the effectiveness of such intervention (Ramey 1998; McCormick et al. 1998). At the Miami site of the IHDP, Hollomom and Scott (1998) reported academic success at age 9, as demonstrated through achievement tests and reduced special education placement, for low birth weight and preterm children who had participated in pediatric follow-up visits and center-based developmental intervention and whose parents attended support groups.

In a randomized control trial, sensory integrative therapy and perceptual motor training was used as an intervention for clumsiness (Roussounis, Gaussen, and Stratton 1987). Although there were significant gains in motor planning abilities in the treated group, there were no accompanying group improvements in functional skills associated with school performance. Thus, the intervention in the Roussounis study demonstrated positive change but did not affect the targeted outcome, school performance.

Kellam et al. (1998) have examined the influences of the classroom context on the course and malleability of aggressive behavior from entrance into first grade through the transition into middle school. At the start of first grade, nineteen public elementary schools and teachers were randomly assigned to intervention or control conditions, where one intervention was directed at reducing aggressive, disruptive behavior. Children were followed through sixth grade, where middle school teachers rated their aggressive behavior. The more aggressive first-grade boys who were in higher aggressive first-grade classrooms were at markedly increased risk for disruptive behavior in middle school. In first grade, boys already were behaving more aggressively than girls. The preventive intervention reduced aggressive behavior among the more aggressive boys, apparently by lowering levels of general classroom aggression. Established findings linking SES with behavior problems were echoed in this study: first-grade boys' poverty level was associated with higher risk of being more aggressive and disruptive in first grade, and thereby increased their vulnerability to classroom level of aggression.

Microsystems— Family and Peers

Quality of Mother-Child Attachment. As noted earlier, Egeland et al. (Egeland and Hiester 1995) found that the experience of day care (as opposed to rearing at home) has a generally negative effect for securely attached children but a generally positive effect for insecurely attached children. While additional research is needed in this specific area, this finding suggests that a resource such as day care may be used in a targeted manner for children demonstrating risk factors in the realm of attachment relationships.

Maltreatment. The Kempe Early Education Project Serving Abused Families (KEEPSAFE) (Oates et al. 1995) used the model of a therapeutic preschool (combined with home-visit care) to target psychological and educational development of physically and sexually abused children. Data from a very small sample (24 children between 1985 and 1988) suggests that most children who experienced the KEEPSAFE intervention made developmental improvement over the three preschool years as measured by the McCarthy Scales of Children's Abilities and the Peabody Picture Vocabulary Test.

Exosystems— Neighborhood, Community, and Socioeconomic Status

Minority Status. Weikart recently reported that the High/Scope Perry Active Learning Preschool Study intervention, which began in 1962 for black children ages 3 to 4 and low in SES, greatly increased the chance of obtaining social responsibility, good economic status, marriage, and good educational performance by age 27 (Weikart 1998). Additionally, in a pilot community-based intervention program (Project CHILD—Community Health Initiatives Against Learning Difficulties), preschoolers (ages 4 to 6 years) from Latino and African-American families were screened for developmental and educational difficulties by a pediatrician and a psychoeducational specialist before school entry and assessed from preschool day care through the school entry transition two years later. Several psychosocial and medical stressors (such as witnessing a death, homelessness, and familial violence) were identified as having diminishing effects on skills gained through preschool academic programs. In addition, parental empowerment and involvement was identified as a key component of successful preschool intervention and contributed to sustained academic achievement (Tuakli-Williams and Carrillo 1995).

Disadvantaged Status. There have been a number of programs targeted to overcome the cognitive, emotional, and resource limitations that may characterize the environments of disadvantaged children during the first several years of life. The short- and long-term positive effects of preschooling, particularly in disadvantaged populations, have been measured (see review, Barnett 1995). Protective short-term influences include an increase in IQ test scores by approximately 5 points. Long-term effects include decreased referral for special education, decreased grade retention (through the end of high school), increased parent satisfaction with children's early school performance, and increased maternal aspirations for their children's occupations (compared to the children's own aspirations).

Supported by the RAND Corporation, Karoly et al. (1998) very recently examined a set of nine programs that represented attempts by government agencies

or other organizations to improve health and development, educational attainment, and economic well-being of disadvantaged children. Of these, six (Early Training Project; Perry Preschool; Houston Parent-Child Development Center—PCDC; Syracuse Family Development Research Program—FRDP; Project Carolina Approach to Responsive Education—CARE; and Infant Health and Development Project—IHDP) collected information about program effects when participating children were 5, 6, and/or 7 years of age, corresponding to kindergarten and first grade levels. In this information, favorable effects seemed to dominate. The programs led to the following advantages for program participants relative to those in control groups: (a) gains in emotional or cognitive development for the child, in the short run, and (b) improvements in educational process and outcomes for the child (decreased frequency of placement in special education class). The size of this advantage for several programs was substantial in the Early Training Project (home visits and preschool program), Perry Preschool (home visits and preschool program), and IHDP (home visits and center-based educational day care).

The Carolina Abecedarian Project. This was an experimental preschool and school-age educational intervention for children from low-income families. At follow-up, 4 to 7 years after the intervention ceased, grade failure rate decreased and intellectual development and academic achievement were most positive for those children who participated in both preschool and school-age programs, supporting evidence that later scholastic achievement and benefits are proportional to duration of treatment received (Campbell 1994; Horacek et al. 1987)

Project CARE. Based on studies and initiatives of the Carolina Abecedarian Project, Project CARE was developed during the 1970s for children at risk for developmental difficulties because of low family SES or little family education. Wasik reported a longitudinal comparison of two intervention strategies of Project CARE: the Child Development Center Program (a day care program addressing cognitive and social development) and the Family Education Program (a home-based child development and parent support program). Findings after 6 months of intervention showed greater child improvement on measures of development (Bayley Scales of Infant Development and the McCarthy Scales of Children's Abilities at later ages) and IQ (Stanford-Binet) for participants taking part in both the family educational program and the day care program. These results help illustrate the benefits and importance of combining parent support programs and child preschool education to improve child outcomes (Wasik et al. 1990).

The High/Scope Perry Preschool Study (Weikart 1998). This education preschool intervention program was begun in 1962 for disadvantaged African-American children ages 3 to 4 years. One of the many studies that have characterized and supported the intervention followed the children through early adulthood (age 27) and determined a \$7.16 return (in cost-benefit analysis) for every dollar originally invested in the preschool program; these adults showed improved social responsibility as well as educational achievement. In the High/Scope Curriculum Comparison study, Weikart compared outcomes at age 23 among children who had taken part in a highly intensive educational program

versus children from a program focused on building individual choice and initiative. This study showed that children from the intensive academic program were significantly less socially responsible at age 23, suggesting that high-quality, early intervention that includes a focus on the child's independent decision-making has long-term benefits that extend into early adult years.

The Mother-Child Home Program (MCHP) (Madden, O'Hara, and Levenstein 1984). Designed for low-income families, this preschool intervention focused on mother-child interaction and later child behavior and academic benefits. The program consisted of 46 home visits, twice a week for two years. Three years later, no significant effects on scholastic achievement, IQ, or teacher-rated school adjustment were found.

Head Start. A small but well-designed study investigated the sustained effects, into kindergarten and first grade, for Project Head Start. Lee et al. (1990) executed a longitudinal follow-up comparison of disadvantaged children attending Head Start, no preschool, and other preschool programs. Participation in generic Head Start programs was compared to both no preschool and other preschool experience for disadvantaged children in two American cities in 1969 and 1970. Incorporating pretest/posttest and comparison group information, the study had advantages over other Head Start impact studies. Both preprogram background and cognitive differences were controlled in a covariance analysis design, using dependent measures in the cognitive, verbal, and social domains. Children who attended Head Start maintained educationally substantive gains in general cognitive/analytic ability, especially when compared to children without preschool experience. However, these effects were not as large as those found immediately following the Head Start intervention. Findings suggested an effect of preschool rather than of Head Start per se. Initial findings of greater effectiveness of Head Start for children of below average initial ability were reduced but not reversed. The diminution of effects over time, especially for low-ability children, may reflect differences in quality of subsequent schooling or home environment.

The Child Parent Center (CPC) Program (Reynolds et al. 1996). This Chicago-based, multisite program utilized a structured half-day care for low-income, mostly black preschoolers to promote school readiness, competence, and academic achievement. Parental involvement and school readiness were rated by teachers at school entry (after preschool) and later at entry to sixth grade (age 12). At follow-up, preschool program participants had significantly higher academic achievement in reading and math as well as less grade retention. In addition, teacher ratings of parent involvement and cognitive readiness in kindergarten significantly mediated the preschool intervention effects. Teacher ratings of school adjustment, school mobility, and grade retention also contributed to the transmission of effects.

Macrosystems

Our review of the literature did not reveal any empirical articles or reviews addressing this arena of cultural beliefs and values as a possible target for intervention studies.

Discussion

A number of critical questions are raised in this examination of peer-reviewed research on risk and protective factors for early school problems and success. First, are there adequate numbers of studies that meet minimal criteria for scientific excellence and how does our understanding of risk factor mechanisms and processes measure up? Second, what proportion of identified risk factors are "causal risk factors" and therefore malleable through appropriate interventions? Third, how have we understood and addressed the complexities of multiple risk factors? Fourth, where are we in terms of identifying protective factors? Finally, have we adequately tested proposed risk factors via intervention studies?

Studies Meeting Criteria for Scientific Excellence

Forty-eight risk-factor and 16 intervention studies, represented in peer-reviewed manuscripts published between 1980 and 1999, were found to meet our minimal criteria for excellence. To review, these criteria included the following:

- A longitudinal, prospective design
- Careful definition and sampling of a population free of the disorder at baseline
- Definition and measurement of the putative risk factors at the baseline
- Definition and measurement of outcomes at follow-up
- Use of analytic strategies to establish statistically significant correlations between risk factors and outcomes

Of these 64 studies, 34 risk studies and 12 intervention studies focused on single risk factors, while the remainder (14 and 4, respectively) considered multiple risk factors. Single-risk-factor studies were predominantly in the Individual Ontogeny domain. Studies focused on multiple risk factors tended to consider fixed markers (e.g., gender, ethnicity, SES) in conjunction with other risk factors.

To be able to better characterize the current state of the literature, after completing our review, we considered several additional criteria of scientific excellence (see Table 7).

These additional criteria represent critical issues, including clarifying descriptions of the target population, moving beyond the simple identification of risk factors to the consideration of risk processes and mechanisms of action, and establishing the potency of risk factors and interventions with measures of effect size interpretable in terms of clinical and policy significance. Far fewer studies met these criteria. Thus, while prospective longitudinal design and careful sampling strengthened most of the studies, many of the risk-factor investigations focused on fixed and variable markers and fewer focused on causal risk factors.

Further, while statistical analyses conducted for the intervention studies yielded evidence of statistical significance between intervention groups and comparison groups, attempts to document practical or clinical significance were

noted in a relatively small proportion of the articles reviewed. The report of a statistically significant result must be accompanied by enough information about the size of its effect to permit evaluation of its clinical significance. Clinical significance can be addressed in several ways (Kraemer 1992). A simple and common way to measure effect size is the standardized mean difference between participant response in intervention and comparison groups (difference between group means divided by the standard deviation of the response in the comparison group). Measured in this manner, an effect size is thought to be small (around .2), moderate (around .5), and large (around .8) (Cohen 1977). Consideration of effect sizes allows us to sort out the relative impact of different risk factors on a given outcome, controlling for other risk factors. Odds ratios also represent a standard by which clinical significance is expressed;⁴ for a small effect size, the minimal value is 1.38; for a moderate effect size, the minimal value is 2.23; and for a large effect size, it is 3.62 (Kraemer 1992). Of the six studies we reviewed that used odds ratios, three reported odds ratios greater than 2.2.

Another potentially valuable addition to this literature would be to use an epidemiological approach and estimate population attributable risk—the proportion of cases that would be prevented if an intervention were 100 percent effective in eliminating the risk factor (Eaton, Badawi, and Melton 1995). However large the effect of a specific risk factor, its practical effect may be small if only a small proportion of the population is exposed to such risk. Conversely, removing a risk factor of small effect size may be valuable if it affects a large number of children. Population attributable risk estimates would be valuable for policy-makers. These risk estimates could be used to estimate the effectiveness of a given intervention program and to compare various intervention strategies.

Causal Risk Factors

Of the reviewed studies addressing risk factors, 27 percent focused on causal risk factors. Of the reviewed studies addressing interventions, 69 percent considered the mechanisms by which the risk factor(s) was hypothesized to operate, and 0 percent utilized targeted or selective interventions that impacted causal risk factors. As noted by Luthar et al. (1997) and other researchers (Masten, Best, and Garmezy 1990; Rutter 1990), the focus of empirical work needs to continue to move forward from simply identifying risk and protective factors to understanding risk and protective processes. Attention to underlying mechanisms is critical for designing and implementing appropriate intervention strategies.

Thus, for example, there are multiple mechanisms that may explain the collection of findings confirming the family's influence on children's adaptation to school. Children's school adjustment is affected by dyadic relationships that include the child (i.e., parent-child and sibling-child). The availability, quality, and style of familial interactions may directly influence the child's development. Family relationships that do not directly include the child (e.g., marital relationships) may also powerfully influence children by their impact on the dyadic family relationships that do involve the child as well as by affecting the child via observational learning. Social systems outside the family (e.g., SES, parental employment, and work conditions) can also produce stresses that impact family processes and thus affect the child.

At the ages of 5 to 7 years, school becomes a major context for children's social development. Barth and Parke (1993) suggest that a number of factors related to the child's social experiences in school have a direct impact on early school success. Possible mechanisms of action may include the fact that, compared to families, schools provide less personalized attention, more heterogeneous beliefs and values, more formal evaluation, and more same-aged playmates. In school, a child experiences dyadic relationships with teachers and peers, experiences interactions with the classroom system (e.g., including rules and norms for classroom behavior, teacher management), and must cope with the larger school institution, all of which contribute to the development of a general attitude toward school and toward educational and social institutions.

Similarly, children's social competencies and relationships with peers have an effect on their transition into elementary school. Ladd, Kochenderfer, and Coleman (1996) postulate that the dynamic features of classroom friendships, including degree of validation and conflict, provide various psychological benefits and costs for children that, in turn, impact their early school adjustment.

Taken together, the transition into school likely plays a critical role in the incubation of preexisting risk and protective factors in the child as well as in the development of new ones. The larger social networks and the new adult-child and institution-child relationships add considerable methodological and conceptual complexity to the study of risk, but there can be little doubt of the importance of considering these school-related factors in developing more complete models of risk development, expression, and protection.

Multiple Risk Factors

As noted above, studies included in this review focused on multiple risk factors in 28 percent of cases. Not only do children experience multiple risk factors, but they may be exposed to these risk factors at varying levels of risk and vulnerability over the course of their lives, raising the possibility that risk might compound over time or that the effects of optimal targeted interventions might fluctuate with child age.

Studies have demonstrated that both individual risk factors and the number of risk factors (cumulative risk) predict children's behavior problems. For example, in a study of the predictors of externalizing behavior, 20 risk variables from four domains (child, sociocultural, parenting, and peer-related) were measured, via in-home interviews and parent reports of child externalizing behaviors (Deater-Deckard et al. 1998). Particular risk factors accounted for 36 percent to 45 percent of the variance in externalizing symptoms, and the number of risk factors present (cumulative risk status) accounted for 19 percent to 32 percent of the variance in externalizing outcomes. It is important that cumulative risk was related to subsequent externalizing even after initial levels of externalizing had been statistically controlled. Moreover, risk variables in all four of the measured domains made significant, unique contributions to this statistical prediction, and there were multiple clusters of risks that led to similar outcomes.

Other models of multiple risk factors contrast with such findings of cumulative risk. For example the Gordon and Jens model (1988) conceives of risk as additive across areas at any given time, but not cumulative over time. It provides for (1) assessment of risk status at several times during early development, (2) assessment of risk in several areas at each time, (3) differential weighting of risk in each area depending on the time of measurement, and (4) consideration of the fact that individuals move in and out of risk at various times.

Multiple risk factors may also operate in causal chains (Kazdin and Kraemer 1997), one causal risk factor leading to another, with the ultimate result being problematic outcomes—behavioral, social, and academic—in early school. The term “mediator risk factor” has been suggested (Baron and Kenny 1986; Kraemer et al. 1997) as a way of modeling such causal chains. A mediator risk factor (e.g., harsh discipline) explains how an earlier risk factor (e.g., low SES) works to produce a negative outcome (e.g., behavioral problems in kindergarten through third grade; see Dodge, Pettit, and Bates 1994). The term “moderator risk factor” has been suggested (Baron and Kenny 1986; Kraemer et al. 1997) for a risk factor, such as male gender, that identifies on whom another risk factor (e.g., an insecure attachment relationship; see Cohn 1990) operates. Identification of such causal chains is important in understanding the process by which problems or disorders are generated. In the literature we reviewed, temporal precedence of one risk factor to another (essential to establishing which risk factor mediates or moderates which) is rarely addressed.

The fact that we can identify multiple risk factors at multiple levels suggests that interventions may need to address those multiple levels—modifying parenting strategies, increasing maternal education and improving mental health, supplementing family financial resources, and even improving the school and neighborhood milieu. The most effective use of the significant resources required to address multiple risk factors also will depend on an increased understanding of the duration and importance of one risk factor compared to another.

Protective Factors

Where are we in terms of identifying protective factors, either broadly construed or by subtype (e.g., “protective-stabilizing,” “protective-enhancing,” “protective but reactive”)? Unfortunately, there has been far less attention to protective factors that reduce susceptibility to disorder and problems than to risk factors. Much of the research effort in this arena has focused on toddlers (Sroufe, Egeland, and Kreutzer 1990; Werner and Smith 1980) and older children/adolescents (Jackson and Frick 1998; Luthar 1991; Luthar 1993; O’Dougherty-Wright et al. 1997; Werner 1994) and, with some notable exceptions (Birch and Ladd 1997; Lothman and Pianta 1993; Egeland and Hiester 1995), has not specifically considered early school success or failure as an outcome. Nonetheless, it is useful to consider Werner’s conclusions about protective factors in the Kauai Longitudinal Study (Werner 1994). Prenatal and perinatal complications for a 1955 cohort of Hawaiian neonates (of whom 54 percent

were economically disadvantaged) were related to impairment of physical and psychological development *only* when combined with chronic poverty, family discord, or and/or parental mental illness. Children who were raised in middle-class homes, in a stable family environment, and by a mother who had finished high school showed few if any lasting effects of stress in utero later in life. In addition, active participation in school activities and identification of a favorite teacher as a role model also served as protective factors (Werner 1997). Werner and colleagues assessed this cohort at ages 1, 2, 10, 18, and 32 years; however, one might expect that the effects of such protective factors would also have been apparent at ages 5 to 7 years.

The limited work that has addressed protective factors related to early school success suggests that parents are a potentially critical socializing agent who can serve as a protective shield for the at-risk youngster. Key parenting skills include rule-setting, rule-monitoring, consistency, and positive emotional tone of communications. Belsky further has postulated that day-to-day experiences in the classroom and on the playground also may be protective in nature, resulting in some children performing better than would otherwise be expected (Belsky and MacKinnon 1994). The work of Ladd and colleagues (Birch and Ladd 1997; Ladd and Hart 1992; Ladd 1990), which focuses on the linkages between relational supports and children's school adjustment, is highly relevant; however, it has not yet been applied to groups of at-risk children.

More research on protective factors is clearly necessary. We need to recognize that such research will engender some of the same conceptual and policy issues outlined earlier for risk research (e.g., many putative protective factors are not amenable to intervention). In addition, there are difficult methodological issues that will need to be solved for research on protective factors to be more definitive (e.g., the inherent interactions between risk factors and protective factors). Nonetheless, identifying protective factors represents a most promising avenue for more fully understanding the mechanisms by which risk translates and fails to translate into disorder and can suggest important and potentially effective interventions that emphasize quite different approaches than those based solely on consideration of risk.

Intervention Studies

It is apparent that low birth weight, low IQ, early behavioral and peer relationship problems, and low SES are risk factors for academic and behavioral problems during the first two years of school. In support of these risk factors, we can draw on both basic risk-factor research as well as intervention research. In addition, lack of maternal education, prenatal exposure to addictive substances, and problematic parenting practices are good candidates for identification as risk factors for difficult school entry. In these cases, there is reasonably solid basic behavioral research evidence. However, our review did not reveal any studies that both measured early academic success and attempted to mount parent-based interventions with high- and low-risk groups defined by these dimensions.

Given our focus on risk factors and the identification of groups of children who are at greater risk for difficulties in adapting to school, the use of targeted or selective interventions continues to represent a logical strategy. For example, prior to kindergarten entrance, it may be useful to identify children who are prone to maladaptive behavioral dispositions, such as aggression, and involve them in targeted interventions designed to promote prosocial, adaptive behaviors such as pursuing positive contacts with peers. However, we also could pursue more universal interventions designed to help all families provide children with important formative experiences in school settings, for example, arranging for children to attend preschool and to develop neighborhood friendships with peers before entering elementary school. Further, in planning peer composition of new classrooms, school administrators may wish to consider grouping children so as to maximize contact with prior friends (Rutter 1990).

Directions for Future Risk Factor and Intervention Research

We need a greater knowledge and understanding of risk factors and processes that utilize established definitions of risk factors as fixed markers, variable markers, or causal risk factors if we are to move forward with effective prevention or treatment interventions. In child health fields, past investigation of risk for poor school adaptation has led to much discussion and theorization of causation, prevention, and/or intervention techniques. Theory now should lead us to begin rigorous empirical investigation of causal relationships among risk factors and outcomes.

Future research should focus on and address the following:

Risk factor research design and methodology

- Emphasize longitudinal methods. Cross-sectional and retrospective designs cannot help us draw causal comparisons and establish relations among risk factors; these causal comparisons are necessary for developing prevention and treatment solutions. Studies must always include *carefully selected* control/contrast groups, documenting intervention compliance where applicable, and establishing blind assessment approaches free of observer bias.
- With an emphasis on longitudinal methods, be aware of the limitations of inferring causality for longitudinal designs (much has happened before the longitudinal research starts, so multiple processes may already be under way).
- Examine the viability of using more proximal measures of risk over more distal ones, which might enable shorter term longitudinal studies to be fruitful.
- Look carefully for nonlinear findings—increasing risk may not always yield increasingly bad outcomes.
- Interweave risk-factor and intervention studies. Intervention research can elucidate and inform our understanding of risk-factor mechanisms if studies are creatively designed to show dose/response relationships and use randomized controlled designs longitudinally. This will, in turn, provide a basis for clinical intervention and provide empirical groundwork for policy-making.
- Replicate model intervention programs on a larger scale.
- Consider the issue of random assignment in intervention studies. What are the obstacles to this research design in the natural environment?

Multiple and confounding risks

- Assess causal chains (mediating risk factors) and alternate possibilities (moderating risk factors) with an examination of how risk-outcome processes work, identifying “branch points” for possible interventions.
- Develop more creative study designs to investigate relative expression and importance of multiple and coexisting risk factors.
- Rethink our organization of possible risk factors. Consider including more specific studies of biological risk factors in conjunction with behavioral and

social risk factors, including gene loci, specific gene products (biochemical responses), plus specific central and peripheral nervous system functions.

- Consider the problems of confounding designation of risk and outcome variables. For example, poor school performance is a risk factor for later negative outcomes, but it also is a negative outcome that might result from risks such as poor childhood nutrition or early maltreatment.

Exploration of known risk factors

- Examine the issue of “critical periods.” Are there times when children are particularly vulnerable or invulnerable to the effects of certain risk factors?
- Many putative risk factors change gradually over time (e.g., the income part of SES). How do these changes get considered in models of risk outcomes?
- In some populations putative risk factors change suddenly over time (e.g., refugee populations who sometimes undergo sharp changes in profession, status, income, etc.). How do these changes get considered in models of risk outcomes?
- Address missing risk factor research. A recent review of the research in early childhood programs suggests that the early childhood years present a special opportunity to intervene in multiple domains of risk and to prepare children for school and life (Gomby et al. 1995). However, most of the research to date has focused on a small subset of single risk factors (e.g., low birth weight and low SES). Few intervention studies have addressed family factors such as social competence, family functioning, child-parent interactions, or family involvement. In addition, basic behavioral research on the interplay among cognition, emotion, and behavior would benefit from an increased focus on the developmental period encompassing 5-, 6-, and 7-year olds; such research then could inform a translational process that would bring the basic research efforts into the applied educational and therapeutic arenas.
- Continue our consideration of diverse populations. With risk factors that have been well-established, such as SES and ethnic diversity, we need to work toward a better understanding of how that risk is conveyed. We also need to increase the diversity of our risk research in terms of specific risk factors (e.g., low birth weight as a risk factor is arguably overrepresented in the literature), ethnic groups (e.g., Native Americans at risk for depression, suicide, and poor academic achievement have been understudied), and family types (e.g., children of teen parents are a rapidly growing population).
- Consider variation in outcomes *within* groups defined by strong fixed and variable risk factors (e.g., SES, ethnicity). Explore further how “resiliency” fits within this area of scientific work.

Risk factor relevance and interpretation of outcomes

- Draw conclusions and connections between risk and outcome. We need to organize and aggregate outcome conclusions more precisely, keeping in mind the possibility of co-morbidity and multiple manifestations of single problems or disorders.

- Multiple outcomes (and perhaps nonlinear relations with multiple risk factors) should be investigated. Risk factors that increase the likelihood of difficult school transitions are also associated with early substance abuse, teenage motherhood, and chronic delinquency. In another example, it appears that children in single-parent homes are at greater risk for problems with school entry as well as psychopathology, including boys' increased risk for conduct disorder, and both girls' and boys' increased risk for obsessive compulsive disorder (Velez, Johnson, and Cohen 1989).
- Establish hypotheses for processes and mechanisms of risk, keeping in mind the differences between indicators (fixed and variable markers) and risk processes. Many risk factors of interest in the literature (gender, ethnicity) are by definition fixed markers. However, so far there have been only limited efforts to distinguish between variable markers and causal risk factors.
- Clinical significance can be established only when the targeted intervention demonstrates ability to impact a causal risk factor and to decrease risk. Studies demonstrating a statistically significant efficacy of an intervention or statistically significant risk depend only on having a sample size large enough to detect whatever size of effect there is, plus adequate measurement, design, and analyses. The principles for establishing clinical or practical significance are based on consideration of factors such as need, cost, and availability of resources. A key question is whether the effect of an intervention is strong enough to warrant the investment of resources necessary to implement it. As Kraemer suggests,

To safeguard, not merely the credibility of scientific research, but the direction and rapidity of progress, as well as to enhance the impact of well-done studies on medical and social policy, it is essential that strategies be exploited to separate the issue of "statistical significance" from that of clinical and practical significance, and to clarify both. (Kraemer 1992, p. 535)

- Policy-makers should encourage their scientific colleagues to utilize strategies to facilitate judgments about the viability and desirability of intervention programs for targeted populations.
- Expand our understanding of protective factors with regard to risk.

Implications for Policy

The final step in considering this general area of applied science is determining whether there is a conceptual framework that facilitates the translation of research findings in risk/protective factor research and intervention research to the policy arena. Identifying and understanding the links between research findings and large-scale public programs and policy is challenging (see paper by Cavanaugh et al., in this report), because researchers and policy-makers operate within different professional contexts, with different demands, vocabulary, communication styles, and measures of success. Researchers establish the basic or clinical science underpinnings as well as assess the needs for new services, the quality and outcomes of existing services, and the reasons implemented interventions succeed or fail. Policy-makers provide new dollars or shift allocations of existing dollars among programs, and influence effectiveness of programs by setting outcome expectations and procedural requirements.

The findings of this review suggest that the need for preventive interventions for the families of children at increased risk for educational problems likely will require changes in social and healthcare policy. It appears that services are frequently designed restrictively, attending only to the individual with the problem, while the larger needs of the family systems, offspring, and the functioning of involved adults seems neglected. Cumulative risk data imply that different services may be required to address multiproblem families. Policy-makers need to consider attempting to increase the effectiveness of intervention programs by delivering more extensive, repeated, and/or longer lasting services.

Evidence indicates that a number of markers and predictors of school problems, many of which are detectable during early infancy, may be valuable to policy-makers in determining how to maximize the effectiveness of finite resource allocation. Experience with child and family social services suggests that this research is unfamiliar to most policy-makers and to those responsible for program/policy implementation. As a result, their efforts to target problems may be based more on anecdotal information, intuition, current salience, or past experience. Identifying and synthesizing available research in this area, followed by broad dissemination and promotion of findings, could catalyze additional efforts to improve and better coordinate our nation's response to the risk of school failure.

Conclusions and Major Lessons Learned

We have learned several things from this examination of peer-reviewed research on risk and protective factors for early school problems and success. First, with some qualifications, we can conclude that there are a substantial number of studies that meet criteria for scientific excellence. Second, approximately one-third of the reviewed research focuses on causal risk factors, while the remainder focuses on fixed and variable markers. Third, the issue of causality is critical to our design and testing of interventions.

1. We have research studies meeting criteria for scientific excellence

More than 60 studies, represented in peer-reviewed manuscripts published between 1980 and 1999, met minimal criteria for excellence (i.e., longitudinal design; problem-free population sample at baseline; measurement of risk factors at baseline and outcomes at follow-up; statistically significant correlations between risk factors and outcomes). Most of these studies considered large (> 100), well-defined samples. Clearly, there is substantial literature that represents a careful research focus on those social-emotional factors that contribute to difficulties in the transition into the early years of school. Limitations in the extant literature include four areas:

- Primary focus on single risk factors. There is less research on multiple risk factors and incomplete consideration of cumulative risk or causal chains (including mediators and moderators) of risk factors.
- Limited research on protective factors. There has been far less attention to protective factors that reduce susceptibility to disorder and problems than to risk factors that increase disorder. Future research must explore models of resilience and the plausibility that positive relationships with parents, teachers, and peers may serve as protective shields for at-risk children.
- Little consideration of clinical significance in addition to statistical significance. Most studies establish statistical significance; relatively few address clinical meaningfulness. Of the studies in this review that did address clinical importance, only three noted odds ratios > 2.2, indicating at least moderate clinical significance. The principles for establishing clinical or practical significance are based on consideration of factors such as need, cost, and availability of resources. Understanding clinical significance of an intervention allows us to try to address a key question: Is the effect of an intervention strong enough to warrant the investment of resources necessary to implement it?
- Incomplete understanding of mechanisms of risk. Future research needs to move beyond the simple identification of risk factors to the consideration of risk processes and mechanisms of action. We need to know if there are critical periods during which children are particularly vulnerable or invulnerable to assumed risk. Assumptions of linear relations between risk and negative outcomes are probably not always

appropriate—when is a “little” stress or a “little” risk beneficial? Many putative risk factors (e.g., SES) change over time. How do we understand the impact of such change? Most importantly, attention to underlying mechanisms is critical for designing and implementing appropriate intervention strategies.

2. We have begun to define and identify causal risk factors

Of the reviewed studies addressing risk factors, 27 percent focused on causal risk factors—those risk factors that can be changed and, when changed, alter the risk of the outcome. These causal risk factors include cognitive deficits, early behavioral problems, parental psychopathology, problematic parenting practices, and difficulties with peers and teachers. Strikingly, several of these are concerned with lack of success in early important relationships (e.g., with parents, peers, and teachers). The remaining studies focused primarily on fixed markers; that is, risk factors that cannot be demonstrated to change. Membership in ethnic minority and immigrant groups, low socioeconomic strata, and difficult temperament all represent fixed markers associated with academic and behavioral difficulties during early school years.

It is critical to recognize which risk factors represent fixed and variable markers. This knowledge is informative; a fixed marker may suggest opportunities for universal interventions. However, this is not a reasonable basis for structuring targeted interventions, which can most appropriately address and shift causal risk factors. The capacity to distinguish between fixed marker and causal risk factors plays a vital role in designing, implementing, and evaluating appropriate interventions.

3. We can use our knowledge base to systematically design and apply interventions

The fact that we can identify multiple risk factors at multiple levels suggests that interventions may need to address those multiple levels—modifying parenting strategies, increasing maternal education and improving mental health, supplementing family financial resources, and even improving the school and neighborhood milieu. The most effective use of the significant resources required to address multiple risk factors also will depend on an increased understanding of the duration and importance of one risk factor compared to another.

Given our focus on risk factors and the identification of children who are at greater risk for difficulties in adapting to school, the use of targeted or selective interventions to address causal and malleable risk factors continues to represent a logical strategy. Problematic relationships, with parents, teachers, and/or peers, seem likely candidates for causal risk factors. For example, prior to kindergarten entrance, it may be useful to identify children who are prone to maladaptive behavioral dispositions, such as aggression, and involve them in targeted interventions designed to promote prosocial, adaptive behaviors such as pursuing positive contacts with peers. Other causal risk factors, for example, parental use of substances or parental psychopathology, are ripe for consideration for future targeted interventions.

We have begun to interweave risk-factor and intervention studies. Intervention research can elucidate and inform our understanding of risk-factor mechanisms if studies are creatively designed to show dose/response relationships and use randomized controlled designs longitudinally. This will, in turn, provide a basis for clinical intervention and provide empirical groundwork for policy-making.

Notes

- 1 It is important to note, however, that the appearance of one characteristic earlier than another in a longitudinal design does not absolutely establish that the first causes the second. For example, inherent limitations in the sensitivity of our measures and observations cannot eliminate those situations in which both characteristics start at the same time (or even when the purported outcome precedes the putative risk) but develop at different rates. In such instances, the observed sequencing may merely reflect different times to reach the threshold for detection by our measures.
- 2 We note that there are particular subsets of research not included in this review: (1) mental retardation or less severe cognitive impairment and direct effects on early school problems or failure, and (2) chronic disease and its effects on early school problems or failure. The presence of a chronic disease (e.g., diabetes mellitus, seizure disorders, asthma, and sensory deficits) may affect school performance directly or indirectly via medication effects, absenteeism, self-esteem, or motivational problems.
- 3 Low birth weight is an individual characteristic that is manipulable and, if low birth weight is addressed directly through interventions (i.e., by treating preterm labor and delaying delivery), it could be conceived of as a causal risk factor. However, most interventions treat low birth weight as a marker of an at-risk population group.
- 4 Odds ratio is defined as $pc(1-pt)/(1-pc)pt$, where pc = comparison response and pt = intervention or treatment response.

References

- Aber, J.L., Allen, J.P., Carlson, V., & Cicchetti, D. (1989). The effects of maltreatment on development during early childhood: recent studies and their theoretical, clinical, and policy implications. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: theory and research on the causes and consequences of child abuse and neglect* (pp. 579-619). New York: Cambridge University Press.
- Alexander, K.L., & Entwisle, D.R. (1988). Achievement in the first 2 years of school: patterns and processes. *Monogr Soc Res Child Dev*, 53(2), 1-157.
- Barnett, W., & Escobar, C. (1989). Research on the cost effectiveness of early educational intervention: implications for research and policy. *Am J Community Psychol*, 17(6), 677-704.
- Barnett, W.S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *Future Child*, 5, 25-50.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J Pers Soc Psychol*, 51(6), 1173-82.
- Barth, J., & Parke, R. (1993). Parent-child relationship influences on children's transition to school. *Merrill-Palmer Quarterly*, 39, 173-95.
- Bax, M., & Whitmore, K. (1987). The medical examination of children on entry to school. The results and use of neurodevelopmental assessment. *Dev Med Child Neurol*, 29(1), 40-55.
- Belcher, H., & Shinitzky, H. (1998). Substance abuse in children: Prediction, protection, and prevention. *Arch Pediatr Adolesc Med*, 152(10), 952-960
- Belsky, J. (1999). Quantity of nonmaternal care and boys' problem behavior/adjustment at ages 3 and 5: exploring the mediating role of parenting. *Psychiatry*, 62(1), 1-20.
- Belsky, J., & MacKinnon, C. (1994). Transition to school: Developmental trajectories and school experiences. Special Issue. School readiness: scientific perspectives. *Early Education and Development*, 5(2), 106-19.
- Bender, S.L., Word, C.O., DiClemente, R.J., Crittenden, M.R., Persaud, N.A., & Ponton, L.E. (1995). The developmental implications of prenatal and/or postnatal crack cocaine exposure in preschool children: a preliminary report [see comments]. *J Dev Behav Pediatr*, 16(6), 418-24; discussion 425-30.
- Berlin, L.J., Brooks-Gunn, J., McCarton, C., & McCormick, M.C. (1998). The effectiveness of early intervention: examining risk factors and pathways to enhanced development. *Prev Med*, 27(2), 238-45.
- Birch, S.H., & Ladd, G.W. (1997). The teacher-child relationship and children's early school adjustment. *J School Psychology*, 24(3), 385-400.
- Birch, S.H., & Ladd, G.W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Dev Psychol*, 34(5), 934-46.
- Blackson, T. (1995). Temperament and IQ mediate the effects of family history of substance abuse and family dysfunction on academic achievement. *J Clinical Psych*, 51(1), 113-22.

- Blondis, T., Snow, J., & Accardo, P. (1990). Integration of soft signs in academically normal and academically at-risk children. *Pediatrics*, 85(3PT2), 421-25.
- Brier, N. (1995). Predicting antisocial behavior in youngsters displaying poor academic achievement: A review of risk factors. *J Dev Behav Pediatr*, 16(4), 271-76.
- Bronfenbrenner, U. (1974). Ecology of childhood. *Child Dev*, 45, 1-5.
- Brown, R.T., & Madan-Swain, A. (1993). Cognitive, neuropsychological, and academic sequelae in children with leukemia. *J Learn Disabil*, 26(2), 74-90.
- Byrd, R.S., Weitzman, M., & Auinger, P. (1997). Increased behavior problems associated with delayed school entry and delayed school progress [see comments]. *Pediatrics*, 100(4), 654-61.
- Byrd, R. S., & Weitzman, M. L. (1994). Predictors of early grade retention among children in the United States. *Pediatrics*, 93(3), 481-7.
- Cadman, D., Walter, S.D., Chambers, L.W., Ferguson, R., Szatmari, P., Johnson, N., & McNamee, J. (1988). Predicting problems in school performance from preschool health, developmental, and behavioural assessments. *CMAJ*, 139(1), 31-6.
- Campbell, F., & Ramey, C. (1994). Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families. *Child Dev*, 65, 684-98.
- Campbell, S.B. (1994). Hard-to-manage preschool boys: externalizing behavior, social competence, and family context at two-year followup. *J Abnorm Child Psychol*, 22(2), 147-66.
- Campbell, S.B. & Ewing, L.J. (1990). Follow-up of hard-to-manage preschoolers: adjustment at age 9 and predictors of continuing symptoms. *J Child Psychol Psychiatry*, 31(6), 871-89.
- Campbell, S.B., Ewing, L.J., Breaux, A.M, & Szumowski, E.K. (1986). Parent-referred problem three-year-olds: follow-up at school entry. *J Child Psychol Psychiatry*, 27(4), 473-88.
- Caplan, G. (1980). An approach to preventive intervention in child psychiatry. *Can J Psychiatry*, 25(8), 671-82.
- Casey, P. & Evans, L. (1993). School readiness: an overview for pediatricians. *Pediatrics in Review*, 14(4), 4-10.
- Cavanaugh, D.A., Lippitt, J., & Mayo, O. (2000, this volume). Resource guide to selected federal policies affecting children's social and emotional development and their readiness for school. See this report.
- Chamberlin, R. (1987). Developmental assessment and early intervention programs for young children: lessons learned from longitudinal research. *Pediatr Rev*, 8(8), 237-247.
- Cicchetti, D., & Toth, S. (1998). The development of depression in children and adolescents. *Am Psychol*, 53(2), 221-41.
- Coates, D., & Lewis, M. (1984). Early mother-infant interaction cognitive status as predictors of school performances and cognitive behavior in six-year-olds. *Child Dev*, 14(4), 1219-30.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.
- Cohen, P., Velez, C. N., Brook, J., & Smith, J. (1989). Mechanisms of the relation between perinatal problems, early childhood illness, and psychopathology in late childhood and adolescence. *Child Dev*, 60(3), 701-09.
- Cohen, S.E. (1995). Biosocial factors in early infancy as predictors of competence in adolescents who were born prematurely. *J Dev Behav Pediatr*, 16(1), 36-41.

- Cohn, D.A. (1990). Child-mother attachment of six-year-olds and social competence at school. *Child Dev*, 61(1), 152-62.
- Coles, C.D., Russell, C. L., & Schuetze, P. (1995). Maternal substance use: epidemiology, treatment outcomes, and developmental effects. An annotated bibliography. *Substance Use and Misuse*, 32(2), 149-68.
- Cowan, P., Cowan, C., Schulz, M., & Heming, G. (1994). Prebirth to preschool family factors in children's adaptation to kindergarten. In R. Parke & S. Kellam (Eds.), *Exploring family relationships with other social contexts*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cowan, P.A., Cowan, C.P., Schulz, M., & Heming, G. (1993). Prebirth to preschool family factors predicting children's adaptation to kindergarten. In R. Parke & S. Kellam (Eds.), *Advances in family research* (Vol. 4). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Deater-Deckard, K., Dodge, K.A., Bates, J.E., & Petit, G.S. (1998). Multiple risk factors in the development of externalizing behavior problems: group and individual differences. *Dev Psychopathol*, 10(3), 469-93.
- Den Ouden, A.L., Kok, J.H., Verkerk, P.H., Brand, R., & Verloove-Vanhorick, S.P. (1996). The relation between neonatal thyroxine levels and neurodevelopmental outcome at age 5 and 9 years in a national cohort of very preterm and/or very low birth weight infants. *Pediatr Res*, 39(1), 142-45.
- Dennis, M., Barnes, M.A., Wilkinson, M., & Humphreys, R.P. (1998). How children with head injury represent real and deceptive emotion in short narratives. *Brain Lang*, 61(3), 450-83.
- Dodge, K.A., Pettit, G.S., & Bates, J.E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Dev*, 65(2 Spec No), 649-65.
- Dudley, M., Gylter, L., Blinkhorn, S., & Barnett, B. (1993). Psychosocial interventions for very low birth weight infants: their scope and efficacy. *Aust N Z J Psychiatry*, 27(1), 74-83.
- Dworkin, P.H. (1989). Behavior during middle childhood: developmental themes and clinical issues. *Pediatr Ann*, 18(6), 347-48, 350-52, 354-55.
- Eaton, W.W., Badawi, M., & Melton, B. (1995). Prodromes and precursors: epidemiologic data for primary prevention of disorders with slow onset. *Am J Psychiatry*, 152(7), 967-72.
- Eckenrode, J., Rowe, E., Laird, M., & Brathwaite, J. (1995). Mobility as a mediator of the effects of child maltreatment on academic performance. *Child Dev*, 66(4), 1130-42.
- Egeland, B., Pianta, R., & O'Brien, M.A. (1993). Maternal intrusiveness in infancy and child maladaptation in early school years. *Dev Psychopathol*, 5(3), 359-70.
- Egeland, B., & Hiester, M. (1995). The long-term consequences of infant day-care and mother-infant attachment. *Child Dev*, 66(2), 474-85.
- Elizur, J. (1986). The stress of school entry: parental coping behaviors and children's adjustment to school. *J Child Psychol Psychiatry*, 27(5), 625-38.
- Entwisle, D. (1995). The role of schools in sustaining early childhood program benefits. *Future Child*, 5, 133-44.
- Entwisle, D. R., Alexander, K. L., Pallas, A. M., & Cadigan, D. (1987). The emergent academic self-image of first graders: its response to social structure. *Child Dev*, 58(5), 1190-206.

- Eriksson, M., & Zetterstrom, R. (1994). Amphetamine addiction during pregnancy: 10-year follow-up. *Acta Paediatr Suppl*, 404, 27-31.
- Farrington, D.P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims*, 4(2), 79-100.
- Fazio, B.B., Naremore, R.C., & Connell, P.J. (1996). Tracking children from poverty at risk for specific language impairment: A 3-year longitudinal study. *J Speech Hear Res*, 39(3), 611-24.
- Feagans, L. (1983). A current review of learning disabilities. *J Pediatr*, 102(4), 487-93.
- Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1997). Attentional difficulties in middle childhood and psychosocial outcomes in young adulthood. *J Child Psychol Psychiatry*, 38(6), 633-44.
- Finkelman, D., Ferrarese, M.J., & Garmezy, N. (1989). A factorial, reliability, and validity study of the Devereux Elementary School Behavior Rating Scale. *Psychol Rep*, 64(2), 535-47.
- Finkelstein, N.W., & Ramey, C.T. (1980). Information from birth certificates as a risk index for educational handicap. *Am J Ment Defic*, 84(6), 546-52.
- Fowler, M.G., & Cross, A. W. (1986). Preschool risk factors as predictors of early school performance. *J Dev Behav Pediatr*, 7(4), 237-41.
- Fowler, S.A., Schwartz, I., & Atwater, J. (1991). Perspectives on the transition from pre-school to kindergarten for children with disabilities and their families. *Exceptional Child*, 58(2), 136-45.
- Fried, P.A., Watkinson, B., & Gray, R. (1992). A follow-up study of attentional behavior in 6-year-old children exposed prenatally to marihuana, cigarettes, and alcohol. *Neurotoxicol Teratol*, 14, 299-311.
- Friedman, R. (1990). Childhood psychiatrics disorders: Focus on conduct disorders. *J Fla Med Assoc*, 77(8), 754-57.
- Frisk, M. (1991). School readiness and CNS maturity: relation to psychophysical and psychosocial development and to early school achievement. *Acta Paediatr Scand*, 80(11), 1078-86.
- Garmezy, N. (1994). Reflections and commentary on risk, resilience and development. In R.J. Haggerty, L. Sherrod, N. Garmezy, & M. Rutter (Eds.), *Stress, risk, and resilience in children and adolescents: processes, mechanisms, and interventions* (pp. 1-19). New York: Cambridge University Press.
- Gomby, D., Larner, M., Stevenson, C.S., Lewit, E.M., & Behrman, R.E. (1995). Long-term outcomes of early childhood programs: analysis and recommendations. *Future Child*, 5(3), 6-24.
- Gordon, B., & Jens, K. (1988). A conceptual model for tracking high-risk infants and making early service decisions. *J Dev Behav Pediatr*, 9(5), 279-86.
- Gordon, R. S. (1983). An operational classification of disease prevention. *Public Health Rep*, 98, 107-09.
- Grantham-McGregor, S. (1995). A review of studies of the effect of severe malnutrition on mental development. *J Nutr*, 125(8 Suppl), 2233S-38S.
- Greenberg, M., Lengua, L., Coie, J., & Pinderhughes, E. (1999). Predicting developmental outcomes at school entry using a multiple-risk model: four American communities. The Conduct Problems Prevention Research Group. *Dev Psychol*, 35(2), 403-17.
- Gross, D., Conrad, B., Fogg, L., Willis, L., & Garvey, C. (1995). A longitudinal study of maternal depression and preschool children's mental health. *Nurs Res*, 44(2), 96-101.

- Guidubaldi, J., & Perry, J.D. (1984). Divorce, socioeconomic status, and children's cognitive-social competence at school entry. *Am J Orthopsychiatry*, 54(3), 459-68.
- Guralnick, M. (1998). Effectiveness of early intervention for vulnerable children: a developmental perspective. *Am J Ment Retard*, 102(4), 319-45.
- Hack, M., Breslau, N., Aram, D., Weissman, B., Klein, N., & Borawski-Clark, E. (1992). The effect of very low birth weight and social risk on neurocognitive abilities at school age. *J Dev Behav Pediatr*, 13(6), 412-20.
- Hartup, W.W. (1996). The company they keep: friendships and their developmental significance. *Child Dev*, 67(1), 1-13.
- Hinshaw, S.P. (1992). Academic underachievement, attention deficits, and aggression: Comorbidity and implications for intervention. *J Consult Clin Psychol*, 60(6), 893-903.
- Hollomon, H., & Scott, K. (1998). Influence of birth weight on educational outcomes at age 9: the Miami site of the Infant Health and Development Program. *J Dev Behav Pediatr*, 19(6), 404-10.
- Horacek, H., Ramey, C., Campbell, E., Hoffmann, K., & Fletcher, R. (1987). Predicting school failure and assessing early intervention with high-risk children. *Acad Child Adolesc Psychiatry*, 26(5), 758-63.
- Horwood, L.J., Mogridge, N., & Darlow, B.A. (1998). Cognitive, educational, and behavioural outcomes at 7 to 8 years in a national very low birth weight cohort [see comments]. *Arch Dis Child Fetal Neonatal Ed*, 79(1), F12-20.
- Jackson, Y., & Frick, P.J. (1998). Negative life events and the adjustment of school-age children: testing protective models. *J Clin Child Psychol*, 27(4), 370-80.
- Jacobvitz, D., & Sroufe, L.A. (1987). The early caregiver-child relationship and attention-deficit disorder with hyperactivity in kindergarten: a prospective study. *Child Dev*, 58(6), 1496-504.
- James, D.C. (1997). Coping with a new society: the unique psychosocial problems of immigrant youth. *J Sch Health*, 67(3), 98-102.
- Jones, M. (1990). The effect of age at school entry on reading achievement scores among South Carolina students. *Remedial and Special Education*, 11(2), 56-62.
- Karoly, L.A., Greenwood, P.W., Everingham, S.S., Hoube, J., Kilburn, M.R., Rydell, C.P., Sanders, M., & Chiesa, J. (1998). *Investing in our children: what we know and don't know about the costs and benefits of early childhood interventions*. Santa Monica, CA: Rand.
- Kaufmann, R.X., & Dodge, J.M. (1997). Prevention and early interventions for young children at risk for mental health and substance abuse problems and their families: A background paper.
- Kazdin, A.E., & Kraemer, H.C. (1997). Contributions of risk-factor research to developmental psychopathology. *Clin Psychol Rev*, 17, 375-406.
- Kellam, S.G., Ling, X., Merisca, R., Brown, C.H., & Ialongo, N. (1998). The effect of the level of aggression in the first grade classroom on the course and malleability of aggressive behavior into middle school. *Dev Psychopathol*, 10(2), 165-85.
- Kendall-Tackett, K. A. & Eckenrode, J. (1996). The effects of neglect on academic achievement and disciplinary problems: a developmental perspective. *Child Abuse Negl*, 20(3), 161-69.
- Kochanek, T.T., Kabacoff, R.I., & Lipsitt, L.P. (1990). Early identification of developmentally disabled and at-risk preschool children. *Exceptional Child*, 56(6), 528-38.
- Kovacs, M., & Goldston, D. (1991). Cognitive and social cognitive development of depressed children and adolescents. *J Am Acad Child Adolesc Psychiatry*, 30(3), 388-92.

- Kraemer, H.C. (1992). Reporting the size of effects in research studies to facilitate assessment of practical or clinical significance. *Psychoneuroendocrinology*, 17(6), 527-36.
- Kraemer, H.C., Kazdin, A.E., Offord, D.R., Kessler, R.C., Jensen, P.S., & Kupfer, D.J. (1997). Coming to terms with the terms of risk. *Arch Gen Psychiatry*, 54, 337-43.
- Kraemer, H.C., Kazdin, A.E., Offord, D.R., Kessler, R.C., Jensen, P.S., & Kupfer, D.J. (in review). Measuring the potency of a risk factor for clinical or policy significance. *Psychological Methods*.
- Kurtz, P.D., Gaudin, Jr., J.M., Wodarski, J.S., & Howing P.T. (1993). Maltreatment and the school-aged child: school performance consequences. *Child Abuse Negl.* 17(5), 581-89.
- Ladd, G. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: predictors of children's early school adjustment? *Child Dev*, 61(4), 1081-100.
- Ladd, G.W., & Hart, C.H. (1992). Creating informal play opportunities: Are parents and preschooler's initiations related to children's competence with peers? *Dev Psychol.* 28(6), 1179-87.
- Ladd, G.W., Kochenderfer, B.J., & Coleman, C.C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Dev*, 67(3), 1103-18.
- Lee, V., Brooks-Gunn, J., Schnur, E., & Liaw, F. (1990). Are Head Start effects sustained? A longitudinal follow-up comparison of disadvantaged children attending Head Start, no preschool, and other preschool programs. *Child Dev*, 61(2), 495-507.
- Levine, M.D. (1999). Social ability and inability. In M.D. Levine, W.B. Carey, & A.C. Crocker (Eds.), *Developmental-behavioral pediatrics* (3rd ed., pp. 536-41). Philadelphia, PA: W.B. Saunders Co.
- Levine, M.D., Swartz, C., Reed, M., Hill, M., Wakely, M., Lind, S., & Marincic, L. (1997). "Schools Attuned" syllabus. Chapel Hill, NC: University of North Carolina School of Medicine.
- Linares, L.O., Leadbetter, B.J., Kato, P.M., & Jaffe, L. (1991). Predicting school outcomes for minority group adolescent mothers: can subgroups be identified? *J Research on Adolescence*, 1(4), 379-400.
- Lothman, D.J., & Pianta, R.C. (1993). Role of child-mother interaction in predicting competence of children with epilepsy. *Epilepsia*, 34(4), 658-69.
- Lukeman, D. & Melvin, D. (1993). Annotation: the preterm infant: psychological issues in childhood. *J Child Psychol Psychiatry*, 34(6), 837-49.
- Luthar, S., Cicchetti, D., & Becker, B. (in press). The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev*.
- Luthar, S.S. (1991). Vulnerability and resilience: a study of high-risk adolescents. *Child Dev*, 62(3), 600-16.
- Luthar, S.S. (1993). Annotation: methodological and conceptual issues in research on childhood resilience. *J Child Psychol Psychiatry*, 34(4), 441-53.
- Luthar, S.S., Burack, J.A., Cicchetti, D., & Weisz, J.R. (1997). *Developmental psychopathology: perspectives on adjustment, risk, and disorder*. Cambridge: Cambridge University Press.
- Madden, J., O'Hara, J., & Levenstein, P. (1984). Home again: effects of the Mother-Child Home Program on mother and child. *Child Dev*, 55(2), 636-47.
- Malakoff, M.E., Underhill, J.M., & Zigler, E. (1998). Influence of inner-city environment and Head Start experience on effacement motivation. *Am J Orthopsychiatry*, 68(4), 630-38.

- Malo, J., & Tremblay, R. (1997). The impact of paternal alcoholism and maternal social position on boys' school adjustment, pubertal maturation and sexual behavior: a test of two competing hypotheses. *J Child Psychol Psychiatry*, 38(2), 187-97.
- Masten, A., Best, K., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Dev Psychopathol*, 2(4), 425-44.
- McCarton, C., Brooks-Gunn, J., Wallace, I., Bauer, C., Bennett, F., Bernbaum, J., Broyles, R., Casey, P., McCormick, M., Scott, D., Tyson, J., Tonascia, J., & Meinert, C. (1997). Results at age 8 years of early intervention for low-birth-weight premature infants. *JAMA*, 277(2), 126-32.
- McCarton, C.M., Wallace, I.F., & Bennett, F.C. (1996). Early intervention for low-birth-weight premature infants: what can we achieve? *Ann Med*, 28(3), 221-5.
- McCormick, M.C., McCarton, C., Tonascia, J., & Brooks-Gunn, J. (1993). Early educational intervention for very low birth weight infants: results from the Infant Health and Development Program. *J Pediatr*, 123(4), 527-33.
- McCormick, M.C., McCarton, C., Brooks-Gunn, J., Belt, P., & Gross, R.T. (1998). The Infant Health and Development Program: interim summary. *J Dev Behav Pediatr*, 19(5), 359-70.
- McFadyen-Ketchum, S.A., Bates, J.E., Dodge, K.A., & Pettit, G.S. (1996). Patterns of change in early childhood aggressive-disruptive behavior: gender differences in predictions from early coercive and affectionate mother-child interactions. *Child Dev*, 67(5), 2417-33.
- McGee, R., & Stanton, W.R. (1994). Smoking in pregnancy and child development to age 9 years. *Journal of Paediatric Health*, 30(3), 263-68.
- McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *Am Psychol*, 53(2), 185-204.
- Morrison, F.J., Griffith, E.M., & Alberts, D.M. (1997). Nature-nurture in the classroom: entrance age, school readiness, and learning in children. *Dev Psychol*, 33(2), 254-62.
- Nokes, C. (1996). A healthy body and a healthy mind?: the relationship between ill-health and cognitive function in school-age children. *J Biosoc Sci*, 28(4), 453-62.
- North, K.N., Riccardi, V., Samango-Sprouse, C., Ferner, R., Moore, B., Legius, E., Ratner, N., & Denckla, M.B. (1997). Cognitive function and academic performance in neurofibromatosis. 1: Consensus statement from the NFI Cognitive Disorders Task Force. *Neurology*, 48(4), 1121-27.
- Oates, R.K., Gray, J., Schweitzer, L., Kempe, R.S., & Harmon, R.J. (1995). A therapeutic preschool for abused children: the KEEPSAFE Project. Kempe Early Education Project Serving Abused Families. *Child Abuse Negl*, 19(11), 1379-86.
- O'Dougherty-Wright, M., Masten, A., Northwood, A., & Hubbard, J. (1997). Long-term effects of massive trauma: Developmental and psychological perspectives. In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology* (Vol. 8, pp. 181-225). Rochester, NY: University of Rochester Press.
- Offord, D.R., Boyle, M.H., & Jones, B.R. (1987). Psychiatric disorder and poor school performance among welfare children in Ontario. *Can J Psychiatry*, 32, 518-25.
- Olsen, P., Vainionpaa, L., Paakko, E., Korkman, M., Pyhtinen, J., & Jarvelin, M. (1998). Psychological findings in preterm children related to neurologic status and magnetic resonance imaging. *Pediatrics*, 102(2), 329-36.
- Ornstein, M., Ohlsson, A., Edmonds, J., & Asztalos, E. (1991). Neonatal follow-up of very low birth weight/extremely low birth weight infants to school age: a critical overview. *Acta Paediatr Scand*, 80 (8-9), 741-48.

- Pagani, L., Boulerice, B., Tremblay, R.E., & Vitaro, F. (1997). Behavioral development in children of divorce and remarriage. *J Child Psychol Psychiatry*, 38(7), 769-81.
- Patterson, G.R., & Narrett, C.M. (1990). The development of a reliable and valid treatment program for aggressive young children. Special Issue. Unvalidated, fringe, and fraudulent treatment of mental disorders. *International Journal of Mental Health*, 19(3), 19-26.
- Pedersen, E., Faucher, T.A., & Eaton, W.W. (1978). A new perspective on the effects of first grade teachers on children's subsequent adult status. *Harvard Educational Review*, 48(1), 1-31.
- Pellegrini, D.S., Masten, A.S., Garmezy, N., & Ferrarese, M.J. (1987). Correlates of social and academic competence in middle childhood. *J Child Psychol Psychiatry*, 28(5), 699-714.
- Pianta, R.C., Egeland, B., & Hyatt, A. (1986). Maternal relationship history as an indicator of developmental risk. *Am J Orthopsychiatry*, 56(3), 385-98.
- Pianta, R.C., Steinberg, M., & Rollins, K. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Dev Psychopathol*, 7(2), 297-312.
- Prizant, B.M., Wetherby, A.M., & Roberts, J.E. (1993). Communication disorders in infants and toddlers. In C. Zeanah (Ed.), *Handbook of infant mental health* (pp. 260-79). New York: Guilford Press.
- Ramey, C., & Ramey, S. (1992). Effective early intervention. *Ment Retard*, 30(6), 337-45.
- Ramey, C., & Ramey, S. (1998). Prevention of intellectual disabilities: early interventions to improve cognitive development. *Prev Med*, 27(2), 224-32.
- Ramey, C.T., Stedman, D. J., Borders-Patterson, A., & Mengel, W. (1978). Predicting school failure from information available at birth. *Am J Ment Defic*, 82(6), 525-34
- Reynolds, A., Weissberg, R., & Kasprow, W. (1992). Prediction of early social and academic adjustment of children from the inner city. *Am J Community Psychol*, 20(5), 599-624.
- Reynolds, A.J., Mavrogenes, N. A., Bezruczko, N., & Hagemann, M. (1996). Cognitive and family-support mediators of preschool effectiveness: a confirmatory analysis. *Child Dev*, 67(3), 1119-40.
- Reynolds, A.J., Weissberg, R.P., & Kasprow, W.J. (1992). Prediction of early social and academic adjustment of children from the inner city. *Am J Community Psychol*, 20(5), 599-624.
- Richardson, G.A., Conroy, M.L., & Day, N.L. (1996). Prenatal cocaine exposure: effects on the development of school-age children. *Neurotoxicol Teratol*, 18(6), 627-34.
- Richardson, S., Koller, H., & Katz, M. (1986). Factors leading to differences in the school performance of boys and girls. *J Dev Behav Pediatr*, 7(1), 49-55.
- Rochiccioli, P., Roge, B., Alexandre, F., & Tauber, M.T. (1992). School achievement in children with hypothyroidism detected at birth and search for predictive factors. *Horm Res*, 38(5-6), 236-40.
- Roussounis, S.H., Gaussen, T.H., & Stratton, P. (1987). A 2-year follow-up study of children with motor coordination problems identified at school entry age. *Child Care Health Dev*, 13(6), 377-91.
- Rutter, M. (1983). Stress, coping, and development: some issues and some questions. In N. Garmezy & M. Rutter (Eds.), *Stress, coping, and development in children*. New York: McGraw-Hill.

- Rutter, M. (1987). The role of cognition in child development and disorder. *Br J Med Psychol*, 60(Pt 1), 1-16.
- Rutter, M. (1990). Interface between research and clinical practice in child psychiatry—some personal reflections: discussion paper. *J R Soc Med*, 83(7), 444-47.
- Saigal, S., Szatmari, P., & Rosenbaum, P.L. (1992). Can learning disabilities in children who were extremely low birth weight be identified at school entry? *J Dev Behav Pediatr*, 13(5), 356-62.
- Sameroff, A., & Chandler, M. (1975). Reproductive risk and the continuum of caretaking casualty. In F. Horowitz, M. Hetherington, S. Scarr-Salapatek, & G. Siegel (Eds.), *Review of child development research* (Vol. 4, pp. 187-244). Chicago: University of Chicago Press.
- Schorr, L. (1988). *Within our reach: breaking the cycle of disadvantage*. New York: Doubleday.
- Schothorst, P., & Engeland, H.V. (1996). Long-term behavioral sequelae of prematurity. *JACAP*, 35(2), 175-83.
- Schwartz, D., McFadyen-Ketchum, S., Dodge, K.A., Pettit, G.S., & Bates, J.E. (1999). Early behavior problems as a predictor of later peer group victimization: moderators and mediators in the pathways of social risk. *J Abnorm Child Psychol*, 27(3), 191-201.
- Sethi, V., & Trend, U. (1996). Early recognition of children with special educational needs: report from a district. *Public Health*, 110(2), 107-08.
- Shapiro, B., Palmer, F., Wachtel, R., & Capute, A. (1984). Issues in the early identification of specific learning disability. *J Dev Behav Pediatr*, 5(1), 15-20.
- Sinclair, D., & Murray, L. (1998). Effects of postnatal depression on children's adjustment to school. Teacher's reports. *Br J Psychiatry*, 172, 58-63.
- Spohr, H.L., Willms, J., & Steinhausen, H. C. (1994). The fetal alcohol syndrome in adolescence. *Acta Paediatr Suppl*, 404, 19-26.
- Sroufe, L.A., Egeland, B., & Kreutzer, T. (1990). The fate of early experience following developmental change: longitudinal approaches to individual adaptation in childhood. *Child Dev*, 61(5), 1363-73.
- Strang, J.D. (1990). Cognitive deficits in children: adaptive behavior and treatment techniques. *Epilepsia*, 31(Suppl 4), S54-58.
- Streissguth, A.P., Barr, H.M., Sampson, P.D., & Bookstein, F.L. (1994). Prenatal alcohol and offspring development: the first fourteen years. *Drug Alcohol Depend*, 36(2), 89-99.
- Suess, P., Porges, S., & Plude, D. (1994). Cardiac vagal tone and sustained attention in school-age children. *Psychophysiology*, 31, 17-22.
- Taylor, H., Klein, N., Schatschneider, C., & Hack, M. (1998). Predictors of early school age outcomes in very low birth weight children. *J Dev Behav Pediatr*, 19(4), 235-43.
- Tremblay, R.E., Pihl, R.O., Vitaro, F., & Dobkin, P.L. (1994). Predicting early onset of male antisocial behavior from preschool behavior. *Arch Gen Psychiatry*, 51, 732-39.
- Tuakli-Williams, J., & Carrillo, J. (1995). The impact of psychosocial stressors on African American and Latino preschoolers. *J Natl Med Assoc*, 87(7), 473-78.
- van Baar, A. & de Graaff, B.M. (1994). Cognitive development at preschool-age of infants of drug-dependent mothers. *Dev Med Child Neurol*, 36(12), 1063-75.
- van Baar, A.L., Soepatmi, S., Gunning, W.B., & Akkerhuis, G.W. (1994). Development after prenatal exposure to cocaine, heroin and methadone. *Acta Paediatr Suppl*, 404(Nov), 40-46.

- van den Oord, E.R.J. (1999). Differences between school classes in preschoolers' psychosocial adjustment: evidence for the importance of children's interpersonal relations. *J Child Psychol Psychiatry*, 40(3), 417-30.
- van Ijzendoorn, M., & van Vliet-Vischers, M. (1988). The relationship between quality of attachment in infancy and IQ in kindergarten. *J Genetics and Psychology*, 149(1), 23-28.
- Velez, C.N., Johnson, J., & Cohen, P. (1989). A longitudinal analysis of selected risk factors for childhood psychopathology. *J Am Acad Child Adolesc Psychiatry*, 28, 861-64.
- Vohr, B., & Garcia Coll, C. (1985). Neurodevelopmental and school performance of very low-birth-weight infants: a seven-year longitudinal study. *Pediatrics*, 76(3), 345-50.
- Vohr, B., & Msall, M. (1997). Neuropsychological and functional outcomes of very low birth weight infants. *Semin Perinatol*, 21(3), 202-20.
- Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of school outcomes based on early language production and socioeconomic factors. *Child Dev*, 65(2 Spec No), 606-21.
- Wasik, B., Ramey, C., Bryant, D., & Sparling, J. (1990). A longitudinal study of two early intervention strategies: Project CARE. *Child Dev* 61(6), 1682-96.
- Weikart, D.P. (1998). Changing early childhood development through educational intervention. *Prev Med*, 27(2), 233-37.
- Weikart, D.P., & Schweinhart, L. J. (1991). Disadvantaged children and curriculum effects. *New Dir Child Dev Fall*(53), 57-64.
- Werner, E., & Smith, R. (1980). *Vulnerable but invincible*. New York: Wiley.
- Werner, E.E. (1992). The children of Kauai: resiliency and recovery in adolescence and adulthood. *J Adolesc Health*, 13(4), 262-68.
- Werner, E.E. (1994). Overcoming the odds. *J Dev Behav Pediatr*, 15(2), 131-36.
- Werner, E.E. (1997). Vulnerable but invincible: high-risk children from birth to adulthood. *Acta Paediatr Suppl*, 422, 103-05.
- White, J.L., Moffitt, T.E., Caspi, A., Bartusch, D.J., Needles, D.J., & Stouthamer-Loeber, M. (1994). Measuring impulsivity and examining its relationship to delinquency. *J Abnorm Psychol*, 103(2), 192-205.
- Wodarski, J.S., Kurtz, P.D., Gaudin, J.M., Jr., & Hoving, P.T. (1990). Maltreatment and the school-age child: major academic, socioemotional, and adaptive outcomes. *Soc Work*, 35(6), 506-13.
- Wolke, D. (1998). Psychological development of prematurely born children. *Arch Dis Child*, 78(6), 567-70.
- Yoshikawa, H. (1995). Long-term effects of early childhood programs on social outcomes and delinquency. *Future Child*, 5(3), 51-75.

Appendix: Tables

Table 1. Neurodevelopmental Constructs for Preschool, Kindergarten, Grade One*

Regulation

Attention Controls

Need for activity modulation
Demand for concentration in group settings
Call for delays in gratification
Requirement to conform to routines
Need for bottom-up processing (as in reading)
Demand for attention to detail

Organization

Temporal-Sequential Ordering

Need to assimilate basic time and seriation concepts/
time vocabulary
Exposure to multistep instructional inputs
Initial ordering of alphabetical, numerical, and
phonological seriation
Assimilation of routines and schedules

Spatial Ordering

Demand for visual discriminatory abilities (e.g., shape
and symbol distinctions)
Stress on visual-motor integration
Requirement for appreciation of visual boundaries (lines
on paper, spaces between words)

Interpretation and Implementation

Language Functions

Expectation for vocabulary growth
spurt
Need for accurate articulation,
intelligibility
Call for keen phonological awareness
and manipulation
Demand for literate (noncolloquial)
language use and comprehension
Introduction of specialized vocabulary

Neuromotor Functions

Stress on eye-hand coordination
and fine motor praxis
Initial awareness of gross motor
efficacy
Requirement for controlled fine
motor stabilization (e.g., pencil
grip, scissors)
Need for nonvisual finger localization
functions

Social Cognitive Functions

Need to emerge for parallel play
Compliance with adult supervision in
play
Initial challenge of sharing and conflict
resolution
Beginning differentiation of peer and
adult interaction rules

Preservation

Memory Capacities

Call for deliberate paired associate learning (e.g., grapheme, phoneme)
Introduction of abstract, symbolic visual memory
Frequent use of episodic memory

Sophistication

Higher Order Cognitive Functions

Strong reliance on sensory data and perception
Need for empirical discovery (awareness) of concepts
Initial encounters with abstract symbols
Experience with trial-and-error hypotheses
Classification skills

*Extracted from Levine, *All Kinds of Minds*, 1997.

Table 2. Risk for Difficult Entry into School: Literature Search and Review Records

Terms	Database Searched	N articles	Limitation	N limitation articles	Deleted:	Deleted:
					any abstract not representing children 0-9 (n = #left)	any abstract not including school success or failure (n = #left)
1. Risk + school entry [or MeSH school]	NLM Medline	96	English, Child (0-18), Year 1980-1999, plus...	70		
			... Review	1	0	
			... Predictor	4	3	2
			... Longitudinal	13	9	2
			... Intervention	2	2	0
2. Protective + school entry [or MeSH school]	NLM Medline	8	English, Child (0-18), Year 1980-1999, plus...	6		
			... Review	0		
			... Predictor	0		
			... Longitudinal	1	1	1
			... Intervention	0		
3. Risk + school entry [or MeSH school]	OVID Medline	301	Journal Article, English, Child (0-18), Year 1981-1999, plus...	186		
			... Review	12	4	0
			... Predictor	6	3	1
			... Longitudinal, longitudinal studies	24	14	1
			... Intervention, early intervention (education), intervention studies	25	14	0
			Journal Article, English, Child (0-18), Year 1981-1999, plus...	9		
4. Protective + school entry [or MeSH school]	OVID Medline	17	... Review	1	1	1
			... Predictor	0		
			... Longitudinal, longitudinal studies	2	2	1
			... Intervention, early intervention (education), intervention studies	2	2	0
			English, Child (0-18), Year 1980-1999, plus...	242		
			... Review	20	18	9
5. Risk + special education	NLM Medline	310	... Predictor	5	4	2
			... Longitudinal	20	16	7
			... Intervention	58	52	30

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Table 2. Risk for Difficult Entry into School: Literature Search and Review Records (*continued*)

Terms	Database Searched	N articles	Limitation	N limitation articles	Deleted: any abstract not representing children 0-9 (n = #left)	Deleted: any abstract not including school success or failure (n = #left)
6. Protective + special education	NLM Medline	13	English, Child (0-18), Year 1980-1999, plus...	6		
			... Review	1	1	0
			... Predictor	0		
			... Longitudinal	1	1	1
			... Intervention	1	1	0
7. Risk + special education	OVID Medline	51	Journal article, English, Child (0-18), Year 1981-1999, plus...	47		
			... Review	3	3	0
			... Predictor	0		
			... Longitudinal, longitudinal studies	11	9	5
			... Intervention, early intervention (education), intervention studies	9	7	4
8. Protective + special education	OVID Medline	2	Journal article, English, Child (0-18), Year 1981-1999, plus...	1	1	1
			... Review	0		
			... Predictor	0		
			... Longitudinal, longitudinal studies	0		
			... Intervention, early intervention (education), intervention studies	0		
9. Risk + kindergarten	NLM Medline	109	English, Child (0-18), Year 1980-1999, plus...	86		
			... Review	4	4	0
			... Predictor	5	5	3
			... Longitudinal	22	21	5
			... Intervention	6	6	3
10. Protective + kindergarten	NLM Medline	6	English, Child (0-18), Year 1980-1999, plus...	5		
			... Review	0		
			... Predictor	0		
			... Longitudinal	1	1	1
			... Intervention	1	1	0

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Table 2. Risk for Difficult Entry into School: Literature Search and Review Records (*continued*)

Terms	Database Searched	N articles	Limitation	N limitation articles	Deleted: any abstract not representing children 0-9 (n = #left)	Deleted: any abstract not including school success or failure (n = #left)
11. Risk + kindergarten; schools, nursery	OVID Medline	140	Journal article, English, Child (0-18), Year 1981-1999, plus...	101		
			... Review	4	4	0
			... Predictor	4	4	3
			... Longitudinal, longitudinal studies	37	36	11
			... Intervention, early intervention (education), intervention studies	8	8	2
12. Protective + kindergarten; schools, nursery	OVID Medline	12	Journal article, English, Child (0-18), Year 1981-1999, plus...	6		
			... Review	0		
			... Predictor	0		
			... Longitudinal, longitudinal studies	2	2	0
			... Intervention, early intervention (education), intervention studies	1	1	0
13. Risk + Transition to school [or MeSH school]	NLM Medline	60	English, Child (0-18), Year 1980-1999, plus...	50		
			... Review	4	0	
			... Predictor	5	0	
			... Longitudinal	12	1	0
			... Intervention	6	3	0
14. Protective + Transition to school [or MeSH school]	NLM Medline	3	English, Child (0-18), Year 1980-1999, plus...	1		
			... Review	0		
			... Predictor	0		
			... Longitudinal	0		
			... Intervention	0		

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Table 2. Risk for Difficult Entry into School: Literature Search and Review Records (*continued*)

Terms	Database Searched	N articles	Limitation	N limitation articles	Deleted: any abstract not representing children 0-9 (n = #left)	Deleted: any abstract not including school success or failure (n = #left)
15. Risk + Transition to school [or MeSH school]	OVID Medline	3	Journal article, English, Child (0-18), Year 1981-1999, plus...	3		
			... Review	0		
			... Predictor	0		
			... Longitudinal, longitudinal studies	1	0	
			... Intervention, early intervention (education), intervention studies	0		
16. Protective + Transition to school [or MeSH school]	OVID Medline	0	Journal article, English, Child (0-18), Year 1981-1999, plus...	0		
			... Review	0		
			... Predictor	0		
			... Longitudinal, longitudinal studies	0		
			... Intervention, early intervention (education), intervention studies	0		

Overview/Summary Page

Tier 1: search terms	Tier 2: search limitations	Tier 3: search terms
Risk + school entry Protective + school entry Risk + special education Protective + special education Risk + kindergarten Protective + kindergarten Risk + transition (to) school Protective + transition (to) school	Journal Article English Child (0-18) Year 1980(1) - 1999	Review Predictor Longitudinal Intervention

Terms examined in two databases: NLM Medline Internet Grateful Med & OVID Medline

Table 3
Risk for Difficult Entry into School – Specific Papers

Citation	Bax and Whitmore 1987
Sample/Population	351 English children entering school, age 5 (283 later at age 7, 230 at age 10).
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Neurodevelopmental abnormalities.
Proposed Mechanism of Risk	Children at age 5 with neurodevelopmental abnormalities are particularly susceptible to learning difficulties when they're older, perhaps due to a broad, over-all neurological dysfunction instead of being simply of below-average cognitive ability.
Predictors	Neurodevelopmental scores of abnormality and doctor's clinical opinions at school entry.
Outcomes	Health and educational outcomes at age 10 (reading, learning, and behavior difficulties); poor academic achievement at age 7.
Evidence of Statistical Significance and Statistical Model	77% of children with a high neurodevelopmental score (high abnormality) at age 5 were referred to school psychologist by age 10.
Evidence of Clinical Significance	None.
Citation	Bender et al. 1995
Sample/Population	60 low SES mothers and 74 children (4–6 years old) in San Francisco.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Prenatal or postnatal environmental exposure to mother's crack-cocaine use.
Proposed Mechanism of Risk	In utero exposure adds to postnatal environmental deprivations.
Predictors	Time of prenatal exposure to cocaine.
Outcomes	Poor expressive language, visual motor drawing, and neurological gross motor performance.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.

(Continues on next page)

Key to abbreviations

ADD	attention deficit disorder	DDST	Denver Developmental Screening Test	OR	odds ratio
ANCOVA	analysis of covariance	ELBW	extremely low birth weight	RISC	Risk Index of School Capability
ANOVA	analysis of variance	FH	family history	SD	standard deviation
CBCL	Child Behavior Checklist	LBW	low birth weight	SES	socioeconomic status
CI	confidence interval	LD	learning disability	VLBW	very low birth weight
CNS	central nervous system	MANOVA	multiple analysis of variance	WISC	Wechsler Intelligence Scale for Children
CRT	complex reaction time			WRAT	Wide-Range Achievement Test

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Blondis, Snow, and Accardo 1990
Sample/Population	67 first-graders from Missouri.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Academic problems.
Proposed Mechanism of Risk	None proposed.
Predictors	Low scores on Missouri Kindergarten Inventory of Developmental Skills: poor right-handed coordination, overall graphesthesia, associated movements left.
Outcomes	Persistent neurological soft signs.
Evidence of Statistical Significance and Statistical Model	Means, standard deviations, and ANOVAs.
Evidence of Clinical Significance	None.
Citation	*Byrd and Weitzman 1994
Sample/Population	9,996 US children (7–17 years at follow-up).
Study Design	Survey.
Risk/Protective Factor Identified	Risk factors: Poverty, male gender, low maternal education, deafness, speech defects, LBW, enuresis, exposure to household smoking. Protective factors: high maternal education, residence with both parents at age 6.
Proposed Mechanism of Risk	Not proposed.
Predictors	Evidence of risk/protective factors on survey.
Outcomes	History of repeating kindergarten or 1st grade.
Evidence of Statistical Significance and Statistical Model	Chi square, logistic regression.
Evidence of Clinical Significance	Odds ratios for risk factors 1.4 to 1.7 Odds ratios for protective factors 0.6 and 0.7.
Citation	Cadman et al. 1988
Sample/Population	1999 children at age 5 (kindergarten), follow-up at age 7 (2nd grade).
Study Design	Prospective longitudinal (3-year).
Risk/Protective Factor Identified	Preschool scores on the Denver Developmental Screening Test (DDST).
Proposed Mechanism of Risk	None proposed.
Predictors	Teacher-rated learning problems in kindergarten, preschool scores on DDST.
Outcomes	Learning problems in 2nd grade (Gates-MacGinitie reading test).
Evidence of Statistical Significance and Statistical Model	Logistic regression model.
Evidence of Clinical Significance	None.

* Protective factors considered

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Campbell and Ewing 1990
Sample/Population	32 hard-to-manage preschoolers and 22 controls, age 9 at follow-up.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Hard-to-manage behaviors before school entry.
Proposed Mechanism of Risk	None proposed.
Predictors	Clinically significant behavior problems at school entry, age 6.
Outcomes	Externalizing disorders at age 9.
Evidence of Statistical Significance and Statistical Model	Multiple regression.
Evidence of Clinical Significance	67% of the hard-to-manage group from kindergarten met DSM-III criteria for an externalizing disorder at age 9.
Citation	Campbell et al. 1986
Sample/Population	46 parent-referred children with problem behaviors, 22 controls.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Preschool problem behaviors.
Proposed Mechanism of Risk	None proposed.
Predictors	Maternal ratings of problem behaviors.
Outcomes	Inattention, impulsivity, aggression, or some combination at school entry.
Evidence of Statistical Significance and Statistical Model	ANOVAs.
Evidence of Clinical Significance	1/3 of group met DSM criteria for ADHD at school entry.
Citation	Coates and Lewis 1984
Sample/Population	40 mothers and their 3-month-old infants, follow-up with child at age 6.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Early mother-child interaction.
Proposed Mechanism of Risk	Effective parents adjust their behavior in accordance with developing child's needs.
Predictors	Frequency and proportion of interaction measures, at age 3 months.
Outcomes	Child's math and reading achievement, conversation and WISC vocabulary and block design, at age 6.
Evidence of Statistical Significance and Statistical Model	Multiple regression analyses; percentage responsivity measures were best predictors of child performance.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Cohen et al. 1989
Sample/Population	976 families in two upstate New York counties.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Unwanted baby, pregnancy emotional trauma, low birth weight, physical trauma during pregnancy, pregnancy problems, childhood accidents, child major and minor illness.
Proposed Mechanism of Risk	Confounding and intervening mechanisms: SES, children's problems at time of original interview. Low intelligence, poor child health, family dissolution, and maternal rejection were "potential mechanisms by which early risk is translated into later psychopathology."
Predictors	Pregnancy problems, child illness/injury, somatic risk, emotional risk.
Outcomes	Behavior disorders.
Evidence of Statistical Significance and Statistical Model	Correlation analyses and regressions; relative risks.
Evidence of Clinical Significance	None.
Citation	Cohen 1995
Sample/Population	105 children born prematurely.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Premature birth.
Proposed Mechanism of Risk	None proposed.
Predictors	Neonatal neurobehavioral organization, early social stimulation, and social class.
Outcomes	Increased intellectual competence, school achievement, social competence and self perception of cognitive competence at ages 2, 5, 8, 12, 18.
Evidence of Statistical Significance and Statistical Model	Multiple regressions.
Evidence of Clinical Significance	None.
Citation	Cohn 1990
Sample/Population	89 kindergarten through 1st grade children and their mothers.
Study Design	Prospective.
Risk/Protective Factor Identified	Child-mother attachment.
Proposed Mechanism of Risk	None proposed.
Predictors	Child-mother attachment, gender (insecurely attached boys only).
Outcomes	Peer relations, being liked by peers and teachers, behavior problems (e.g., aggression).
Evidence of Statistical Significance and Statistical Model	MANOVA, intercorrelations.
Evidence of Clinical Significance	None.

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Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Den Ouden et al. 1996
Sample/Population	717 preterm and/or VLBW infants born in 1983 in the Netherlands.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Hypothyroximia.
Proposed Mechanism of Risk	Direct effect of hypothyroximia on brain maturation.
Predictors	Thyroxine levels in first week of life.
Outcomes	14% of survivors had handicapping disabilities at age 5; at age 9, 27% had grade retention, 18% required special education.
Evidence of Statistical Significance and Statistical Model	Multivariate logistic regression.
Evidence of Clinical Significance	School failure at age 9 significantly related to thyroxine levels in 1st week of life; 30% increase in odds for neurologic dysfunction with early thyroxine levels 1 SD lower.
Citation	Dodge, Pettit, and Bates 1994
Sample/Population	585 children followed from preschool to grade 3.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Low SES in early childhood.
Proposed Mechanism of Risk	Low SES mediated by status-related socializing experiences.
Predictors	Preschool SES.
Outcomes	Behavior problems (teacher-rated externalizing and peer-rated aggressive behaviors) in grades K–3.
Evidence of Statistical Significance and Statistical Model	Correlations, hierarchical regression and structural equations analyses.
Evidence of Clinical Significance	None.
Citation	Egeland, Pianta, and O'Brien 1993
Sample/Population	37 "high-risk" children; 145 comparison children.
Study Design	Longitudinal.
Risk/Protective Factor Identified	"high risk" = intrusive maternal interactions with child in feeding and play at 6 months old.
Proposed Mechanism of Risk	Intrusive caregiving at 6 months may have adverse effects in 1st, 2nd, and 3rd grades where the child may have difficulty adapting self-control and interactions, interest, and involvement with teachers and peers.
Predictors	Intrusive maternal interactions with child at 6 months, male gender.
Outcomes	Academic problems (measured by Peabody Individual Achievement Test), social (teacher-rated problems), emotional (teacher-rated problems), and behavioral (measured with the CBCL) in first and second grade.
Evidence of Statistical Significance and Statistical Model	MANCOVA, then ANCOVA – findings were still robust after covarying for maternal IQ, stressful family life events, and maternal affective behavior.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Elizur 1986
Sample/Population	58 first grade children exhibiting signs of maladjustment and their parents .
Study Design	Prospective.
Risk/Protective Factor Identified	Father's coping, mother's coping, parental support of children, parents' cooperation in coordinating coping strategies.
Proposed Mechanism of Risk	None proposed.
Predictors	Parental coping; signs of child distress at school entry.
Outcomes	Child's adjustment, cohesive family pattern.
Evidence of Statistical Significance and Statistical Model	Synchronous and cross-lagged correlations
Evidence of Clinical Significance	None.
Citation	Fazio, Naremore, and Connell 1996
Sample/Population	34 US children from impoverished environments.
Study Design	Longitudinal 3-year.
Risk/Protective Factor Identified	Poverty.
Proposed Mechanism of Risk	None proposed.
Predictors	Performance on standardized/experimental tests of language development.
Outcomes	Specific language impairment or academic failure.
Evidence of Statistical Significance and Statistical Model	Multi-regression model, chi square, correlations.
Evidence of Clinical Significance	None.
Citation	Finkelstein and Ramey 1980
Sample/Population	921 first grade children from North Carolina.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Race, birth order, weight, maternal age and education (at birth – from birth certificate).
Proposed Mechanism of Risk	None proposed.
Predictors	Scores on measures of intellectual competence and measure of adaptive behavior.
Outcomes	Educational status as "handicapped" or "non-handicapped" in 1st grade (as determined from scores on the Peabody Picture Vocabulary Test and Pupil Rating Scale).
Evidence of Statistical Significance and Statistical Model	Linear classification analysis to predict known outcome.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	*Fowler and Cross 1986
Sample/Population	210 US preschoolers.
Study Design	Prospective.
Risk/Protective Factor Identified	Developmental, medical, and social factors (family history and education, gender, age). Protective factors: higher maternal education, absence of family history for learning problems.
Proposed Mechanism of Risk	None proposed.
Predictors	0–11 Risk Index of School Capability (RISC) score, physician's assessment of attention.
Outcomes	Grade failure, poor reading and math scores in 1st and 2nd grades.
Evidence of Statistical Significance and Statistical Model	Linear and logistic regression.
Evidence of Clinical Significance	RISC scale had 98% positive predictive value of successful grade completion and 70% predictive value for failure.
Citation	Fried, Watkinson, and Gray 1992
Sample/Population	126 72-month-old children in Canada.
Study Design	Follow-up.
Risk/Protective Factor Identified	Maternal substance use in pregnancy.
Proposed Mechanism of Risk	Impaired CNS development.
Predictors	Maternal smoking, marihuana, or alcohol use during pregnancy.
Outcomes	Success/failure on vigilance tasks; positive impulsivity or hyperactivity ratings by mother.
Evidence of Statistical Significance and Statistical Model	Discriminant function analysis.
Evidence of Clinical Significance	Prenatal marihuana associated with increased omission errors in vigilance task. Dose-response relationship between prenatal smoking and poorer response inhibition as well as higher error of commission rates.
Citation	Frisk 1991
Sample/Population	113 girls and 102 boys at entry into Swedish schools, age 7.
Study Design	Longitudinal (to grade 3).
Risk/Protective Factor Identified	Poor CNS development.
Proposed Mechanism of Risk	CNS dysfunction.
Predictors	Slow complex reaction time (CRT).
Outcomes	Grade 1, slow CRT boys had poor ratings for gross and fine motoricity, concentration, and language development.
Evidence of Statistical Significance and Statistical Model	Chi square, Fischer's non-parametric, t-test, correlations.
Evidence of Clinical Significance	None.

* Protective factors considered

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Greenberg et al. 1999.
Sample/Population	337 families from 4 American communities.
Study Design	Longitudinal case-control.
Risk/Protective Factor Identified	Single parent, number of siblings, mother's age at child's birth, ethnicity, life stress, marital distress, social support, home environment, parent depression, neighborhood risk.
Proposed Mechanism of Risk	None proposed.
Predictors	Demographics, family psychosocial status, maternal depression, neighborhood quality.
Outcomes	Children's psychological problems (externalizing/internalizing), children's social competence, and academic achievement at grade 1.
Evidence of Statistical Significance and Statistical Model	Multiple regression models, least squares regression, path analyses.
Evidence of Clinical Significance	None.
Citation	Gross et al. 1995
Sample/Population	97 preschool-aged children followed 2–3 years.
Study Design	Longitudinal cohort.
Risk/Protective Factor Identified	Maternal depression.
Proposed Mechanism of Risk	Boys' behaviors may be more aversive to depressed mothers, who may then respond negatively and reinforce difficult behaviors .
Predictors	Maternal depression, gender.
Outcomes	Preschool children's mental health (social competence and behavior problems).
Evidence of Statistical Significance and Statistical Model	Mean differences, item analyses.
Evidence of Clinical Significance	None.
Citation	Hack et al. 1992
Sample/Population	249 VLBW children in Ohio, 8–9 years old.
Study Design	Longitudinal.
Risk/Protective Factor Identified	VLBW.
Proposed Mechanism of Risk	None proposed.
Predictors	VLBW vs. NBW, SES.
Outcomes	VLBW had significantly lower scores on tests of language, IQ, memory, visual and fine motor skills, and academic achievement; VLBW had more behavior problems (higher CBCL scores).
Evidence of Statistical Significance and Statistical Model	Two-tailed univariate analyses.
Evidence of Clinical Significance	Odds ratios (–1.2 to 4.9).

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Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Horwood, Mogridge, and Darlow 1998
Sample/Population	Two New Zealand birth cohorts: 298 VLBW and 1,092 controls.
Study Design	Longitudinal cohort.
Risk/Protective Factor Identified	VLBW status.
Proposed Mechanism of Risk	A gradient relationship between ELBW, VLBW and NBW children and level of impairment.
Predictors	VLBW status, ELBW status, gender.
Outcomes	Child behavior problems, decreased cognitive ability and poor school achievement (enrollment in special education) at age 7–8.
Evidence of Statistical Significance and Statistical Model	t-tests; chi squares; multiple regression methods for confounding variables.
Evidence of Clinical Significance	Odds ratios 2.1 to 4.4 for behavior problems; 1.7 to 4.9 for poor school achievement, and 2.9 to 6.3 for special education.
Citation	*Jackson and Frick 1998
Sample/Population	140 children aged 8–13.6 years.
Study Design	Cross-sectional.
Risk/Protective Factor Identified	Protective factors: high SES and IQ, easy temperament, positive family relationships and personal growth within family.
Proposed Mechanism of Risk	None proposed.
Predictors	Protective factors and negative life events, gender differences.
Outcomes	Adaptive and non-adaptive behavior (internalizing/externalizing behavior).
Evidence of Statistical Significance and Statistical Model	Regression analyses – negative life events not related to adaptive behavior. Protective factors were predictive of absence of non-adaptive behavior.
Evidence of Clinical Significance	None.
Citation	Jacobvitz et al. 1987
Sample/Population	68 children assessed at ages 6 months, 2, 3, and 5 years.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Mother-child interactions before kindergarten.
Proposed Mechanism of Risk	None proposed.
Predictors	Maternal intrusive care, seductive behavior and over-stimulation.
Outcomes	Hyperactivity and distractibility at kindergarten (age 5–6).
Evidence of Statistical Significance and Statistical Model	Correlations.
Evidence of Clinical Significance	Distractibility at 42 months and motor immaturity (after birth) were predictive of hyperactivity at kindergarten.

* Protective factors considered

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	James 1997
Sample/Population	Immigrant children and adolescents.
Study Design	Cross-sectional descriptive.
Risk/Protective Factor Identified	Immigration: conflicts and adjustments to new home, school, and society.
Proposed Mechanism of Risk	Psychosocial problems, school failure, drug use, other risk-taking behavior.
Predictors	None.
Outcomes	None.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.
Citation	Jones 1990
Sample/Population	All South Carolina students grades 1, 2, 3, and 6.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Age, race, sex, lunch payment status.
Proposed Mechanism of Risk	None proposed.
Predictors	Age at school entry, gender, ethnicity, lunch-assisted vs. full-paying students.
Outcomes	Reading failure on the Basic Skills Assessment Program reading test.
Evidence of Statistical Significance and Statistical Model	Logistic regression.
Evidence of Clinical Significance	Adjusted odds ratios: risk of failure greatest for younger students when controlled for race, sex, and lunch-paying. Race, sex, lunch-paying = greatest risk overall.
Citation	Kochanek, Kabacoff, and Lipsitt 1990
Sample/Population	268 children (handicapped adolescents at follow-up) and 268 controls.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Environmental factors and child performance data at birth, 4, 8, and 12 months old.
Proposed Mechanism of Risk	None proposed.
Predictors	Maternal education, child performance data at birth, 4, 8, and 12 months old.
Outcomes	Status as handicapped in adolescence, learning and behavior problems.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.

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Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Ladd, Kochenderfer, and Coleman 1996
Sample/Population	82 kindergarten children.
Study Design	Cross-sectional.
Risk/Protective Factor Identified	Quality of friendships.
Proposed Mechanism of Risk	Making friends establishes support bases and better integration into the academic milieu.
Predictors	Child's perceptions of friend conflict, exclusivity, validation, aid, self-disclosure.
Outcomes	Perceived conflict associated with school maladjustment for boys, exclusivity associated with lower levels of achievement.
Evidence of Statistical Significance and Statistical Model	Correlation, regression, and factor analyses.
Evidence of Clinical Significance	Validation and aid "forecasted" gains in perceived support and aid predicted improvements in school attitudes.
Citation	Ladd 1990
Sample/Population	125 kindergartners.
Study Design	Prospective, longitudinal.
Risk/Protective Factor Identified	Classroom peer relations.
Proposed Mechanism of Risk	None proposed.
Predictors	Number of friends; peer rejection.
Outcomes	Perception of school, school attitude, school achievement (behavioral).
Evidence of Statistical Significance and Statistical Model	Correlational, regression, and principle components analyses; children who gained friends through year gained achievement as well.
Evidence of Clinical Significance	None.
Citation	Malo and Tremblay 1997
Sample/Population	Boys from low SES environments.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Maternal social position, family SES, paternal alcoholism.
Proposed Mechanism of Risk	None proposed.
Predictors	Low SES, paternal alcoholism.
Outcomes	School placement, among a long list of others.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.

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Table 3 (continued)

Risk for Difficult Entry into School — Specific Papers

Citation	McCarton et al. 1997
Sample/Population	336 LBW infants (lighter and heavier) follow-up (at 8 years).
Study Design	Longitudinal.
Risk/Protective Factor Identified	LBW lighter (2000g); LBW heavier (2001–2500g).
Proposed Mechanism of Risk	None proposed.
Predictors	Cognitive functioning, academic achievement, behavior, health at 8 years.
Outcomes	Modestly improved outcomes in heavier LBW infants.
Evidence of Statistical Significance and Statistical Model	ANOVA.
Evidence of Clinical Significance	None.
Citation	McFadyen-Ketchum et al. 1996
Sample/Population	Children followed from kindergarten to third grade (n=585).
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Prekindergarten measure of aggression from CBCL; coercive mother-child interactions and home environment, gender.
Proposed Mechanism of Risk	Mother-child interactions may be more predictive because they are the primary caregivers of young children and spend much more time with their children than fathers.
Predictors	Mother-child interactions of coercion and affection; level of kindergarten aggression predictive of later aggression.
Outcomes	High levels of aggression in kindergarten for both boys and girls with maternal coercion at home. Increase in aggression for boys over time with high maternal coercion and low maternal affection, but not for girls.
Evidence of Statistical Significance and Statistical Model	Pearson Correlations; ANOVAs.
Evidence of Clinical Significance	Teacher ratings of aggression observed to increase or decrease over time.
Citation	McGee and Stanton 1994
Sample/Population	N=765 children from New Zealand, followed from birth to age 18.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Maternal smoking during pregnancy.
Proposed Mechanism of Risk	Association between smoking and maternal reports of behavior problems reflect confounds with maternal mental health.
Predictors	Maternal smoking status during pregnancy.
Outcomes	Maternal rating of child behavior problems at school entry.
Evidence of Statistical Significance and Statistical Model	Regression analyses; maternal rating of problem behaviors at school entry was the only significant finding linked to smoking during pregnancy (both girls and boys).
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School — Specific Papers

Citation	Morrison, Griffith, and Alberts 1997
Sample/Population	Kindergartners and 1st graders.
Study Design	"Pre-post" design.
Risk/Protective Factor Identified	Age at school entry.
Proposed Mechanism of Risk	Academic risk.
Predictors	Age was not a good predictor of learning or academic risk.
Outcomes	None.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.
Citation	Offord, Boyle, and Jones 1987
Sample/Population	2643 welfare children, 6–16 years old.
Study Design	Survey (cross-sectional).
Risk/Protective Factor Identified	SES.
Proposed Mechanism of Risk	None proposed.
Predictors	Parental welfare status, gender.
Outcomes	Psychiatric disorder and poor school performance.
Evidence of Statistical Significance and Statistical Model	Logistic regression, chi square.
Evidence of Clinical Significance	Odds ratio for psychiatric disorder 2.02 to 4.12 and for poor school performance 1.68 to 6.54.
Citation	Olsen et al. 1998
Sample/Population	42 8-year old children with history of pre-term delivery plus controls.
Study Design	Birth cohort.
Risk/Protective Factor Identified	Preterm delivery.
Proposed Mechanism of Risk	None proposed.
Predictors	Preterm delivery and poor health at delivery.
Outcomes	Psychological performance, teacher-reported learning disability and neurologic exam at age 8.
Evidence of Statistical Significance and Statistical Model	Non-parametric t-test; correlation coefficients.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	*Pagani et al. 1997
Sample/Population	2,000 school children followed from age 6 to age 12.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Parent divorce (as risk factor) and remarriage (as protective factor).
Proposed Mechanism of Risk	There may be problems such as internalizing symptoms and impaired school performance that are "vulnerable to family breakdown".
Predictors	Age of child at parent divorce, parents' marital status.
Outcomes	Child's problem behaviors; remarriage had protective effect on hyperactivity.
Evidence of Statistical Significance and Statistical Model	Autoregressive modeling technique.
Evidence of Clinical Significance	None.
Citation	Pianta, Steinberg, and Rollins 1995
Sample/Population	436 children from school entry to grade 2.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Poor student-teacher relationships.
Proposed Mechanism of Risk	None proposed.
Predictors	Student-Teacher Relationship Scale – quality of student-teacher relationship in kindergarten.
Outcomes	Child behavior, adjustment, and competence problems in 2nd grade.
Evidence of Statistical Significance and Statistical Model	Correlations, ANOVA, discriminant function analyses.
Evidence of Clinical Significance	None.
Citation	Reynolds, Weissberg, and KasproW 1992
Sample/Population	683 U.S. inner-city kindergartners and 1st graders.
Study Design	Longitudinal cohort.
Risk/Protective Factor Identified	Demographics (ethnicity, SES, grade level), family and school factors.
Proposed Mechanism of Risk	Constructive relationship between parent and teacher is a critical element in the family-school relationship (<i>quality</i> of parent school involvement). Quality may reflect "good" parenting, may promote a teacher's relation with the child, and may provide social support for the family and better school adjustment for family.
Predictors	Quality of parent involvement, exposure to life events, SES in kindergarten.
Outcomes	Early school adjustment: competence behavior, problem behavior, reading achievement, math achievement, and school absences at first grade.
Evidence of Statistical Significance and Statistical Model	Multiple regression.
Evidence of Clinical Significance	None.

* Protective factors considered

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Richardson, Conroy, and Day 1996
Sample/Population	Offspring of 28 cocaine-using pregnant women/mothers and children of 523 non-users.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Prenatal cocaine exposure.
Proposed Mechanism of Risk	Effects of exposure may result from interaction between exposure (CNS changes) and environmental factors.
Predictors	Cocaine and other substance use/abuse during early pregnancy.
Outcomes	Child deficits in ability to sustain attention on vigilance task at age 6 years.
Evidence of Statistical Significance and Statistical Model	ANCOVA: No significant effects found on growth, intellectual ability, academic achievement or teacher-rated classroom behavior. One significant effect found on attention.
Evidence of Clinical Significance	None.
Citation	Rochiccioli et al. 1992
Sample/Population	58 cases of neonatal hypothyroidism, matched controls.
Study Design	Prospective, screening neonatal.
Risk/Protective Factor Identified	Neonatal hypothyroidism.
Proposed Mechanism of Risk	None proposed.
Predictors	Lower T4 levels at birth.
Outcomes	Increased grade retention, lower IQ.
Evidence of Statistical Significance and Statistical Model	Non parametric analyses.
Evidence of Clinical Significance	None.
Citation	Roussounis, Gaussen, and Stratton 1987
Sample/Population	At school entry: 17 "clumsy" children, 17 age- and gender-matched controls.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Motor coordination problems.
Proposed Mechanism of Risk	None proposed.
Predictors	Failure on standardized Motor Test Battery.
Outcomes	Impaired educational attainment; inferior motor performance.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.

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Table 3 (continued)
Risk for Difficult Entry into School — Specific Papers

Citation	Schothorst and Van Engeland 1996
Sample/Population	177 children with neonatal problems.
Study Design	Longitudinal prospective follow-up.
Risk/Protective Factor Identified	Preterm birth.
Proposed Mechanism of Risk	None.
Predictors	Preterm birth.
Outcomes	Behavior problems, social and school competence.
Evidence of Statistical Significance and Statistical Model	Multiple regression.
Evidence of Clinical Significance	None.
Citation	Saigal, Szatmari, and Rosenbaum, 1992
Sample/Population	81 ELBW children "at risk" for learning problems at age 5, tested at age 8.
Study Design	Prospective.
Risk/Protective Factor Identified	Birth weight.
Proposed Mechanism of Risk	ELBW population difficult to screen because of already-present risk and developmental limitations in cognition, language, motor and social functioning.
Predictors	ELBW status and "at risk" status at age 5 from Florida Kindergarten Screening Battery.
Outcomes	LD or IQ problems at age 8.
Evidence of Statistical Significance and Statistical Model	Likelihood ratios to test Florida Kindergarten Screening Battery; correlations.
Evidence of Clinical Significance	None.
Citation	Schwartz et al. 1999
Sample/Population	389 kindergarteners and 1st graders.
Study Design	Longitudinal follow-up in 3 years.
Risk/Protective Factor Identified	Early behavior problems.
Proposed Mechanism of Risk	Behavior problems determine victimization mediated by peer rejection, moderated by dyadic friendships.
Predictors	Behavior problems.
Outcomes	Victimization.
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School — Specific Papers

Citation	Streissguth et al. 1994
Sample/Population	500 children with Fetal Alcohol Syndrome (FAS).
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	FAS.
Proposed Mechanism of Risk	Cerebellar dysgenesis.
Predictors	Maternal drinking before and during pregnancy.
Outcomes	Child's problems with IQ, balance, attention/reaction (vigilance task), neurobehavioral problems at age 4.
Evidence of Statistical Significance and Statistical Model	Correlations and measures of covariance.
Evidence of Clinical Significance	None.
Citation	Taylor et al. 1998
Sample/Population	68 VLBW children and 65 controls, age 6.7–6.9 years.
Study Design	Longitudinal.
Risk/Protective Factor Identified	VLBW vs. <750g birth weight.
Proposed Mechanism of Risk	"Effects of biologic risk may diminish with age and are increasingly overshadowed by environmental factors." Social risk depends partly on biologic risk.
Predictors	Neonatal Risk Index (biologic risk), age, gender and social risk factors.
Outcomes	Cognitive function, neuropsychological abilities, academic achievement, parent and teacher reports of adaptive behavior and school performance.
Evidence of Statistical Significance and Statistical Model	Linear regression.
Evidence of Clinical Significance	Odds ratios 1.72 to 8.61 (95% CI).
Citation	Tremblay et al. 1994
Sample/Population	1,034 boys from Quebec participating in study from kindergarten to 13 years old.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Kindergarten personality.
Proposed Mechanism of Risk	None proposed.
Predictors	Impulsivity, anxiety, reward dependence in kindergarten.
Outcomes	Stable, highly delinquent behavior at age 11–13.
Evidence of Statistical Significance and Statistical Model	Likelihood ratios, logistic regression analyses.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School — Specific Papers

Citation	Van Baar and de Graaff 1994
Sample/Population	35 prenatally drug-exposed children and 35 controls, from Amsterdam.
Study Design	Prospective longitudinal.
Risk/Protective Factor Identified	Prenatal exposure to drugs.
Proposed Mechanism of Risk	Children may be less cooperative due to addicted parents' difficulties in adjusting to school hours.
Predictors	Having drug-dependent mother, prenatal exposure to drugs.
Outcomes	Development and cognitive functioning at preschool age.
Evidence of Statistical Significance and Statistical Model	Rank order correlations; ANOVA.
Evidence of Clinical Significance	None.
Citation	Van Ijzendoorn and Van Vliet-Vischers 1988
Sample/Population	77 children (mean age = 24 months).
Study Design	Longitudinal.
Risk/Protective Factor Identified	Attachment problems.
Proposed Mechanism of Risk	None proposed.
Predictors	Secure vs. insecure attachment (secure = highest IQ).
Outcomes	Performance on IQ test (Keiden Diagnostic test).
Evidence of Statistical Significance and Statistical Model	None.
Evidence of Clinical Significance	None.
Citation	Vohr and Garcia Coll 1985
Sample/Population	42 VLBW infants.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Very low birth weight and impaired neurological development.
Proposed Mechanism of Risk	Neurodevelopmental deficits.
Predictors	Scores and classification of neuro-development at age 1.
Outcomes	IQ level, reading age level (WRAT), special education needs at age 7.
Evidence of Statistical Significance and Statistical Model	ANOVA, student's t-test, chi square.
Evidence of Clinical Significance	None.

(Continues on next page)

Table 3 (continued)
Risk for Difficult Entry into School – Specific Papers

Citation	Walker et al. 1994
Sample/Population	32 children 7 months old, follow-up at 36 months and 10 years old.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	At 7 and 36 months: family SES, intellectual ability (Stanford-Binet) and language ability (cumulative number of different words spoken; mean length of utterance in morphemes).
Proposed Mechanism of Risk	None proposed.
Predictors	SES, IQ, language ability.
Outcomes	Student intellectual ability, language academic achievement.
Evidence of Statistical Significance and Statistical Model	Hierarchical regression.
Evidence of Clinical Significance	None.

Table 4
Risk for Difficult Entry into School – Review Papers

Citation	*Brier 1995
Population Addressed	Children with delinquency and antisocial behavior.
Literature Reviewed, # articles	90.
Aims of article	To investigate risk factors involved with antisocial behavior and poor academic achievement.
Discussion of risk or protective factors	Risk factors included: temperament (hyperactivity, distractibility, rigidity) school attitudes, poor/protective parenting, IQ.
Relevant Outcomes addressed	Delinquency, school failure.
Conclusions and Over-all Message	Risk and protective factors mentioned can be used in a preventive manner against antisocial behavior and school failure.
Future needs, clinical significance	Treatments and interventions need to target these risk/protective factors.
Citation	Casey and Evans 1993
Population Addressed	Preschoolers.
Literature Reviewed, # articles	11.
Aims of article	To address issues, definitions, and the physician's roles involved in assessing school readiness.
Discussion of risk or protective factors	Demographic, age and clinical factors; medical risks.
Relevant Outcomes addressed	School success/failure – grade retention or failure.
Conclusions and Over-all Message	School readiness should be addressed cautiously (outlines a conservative approach for physicians); retention is not generally recommendable.
Future needs, clinical significance	Need collaborative assessments for school readiness among physician, parents and school staff.
Citation	Cicchetti and Toth 1998
Population Addressed	Children and adolescents with depressive disorders.
Literature Reviewed, # articles	174.
Aims of article	To describe a "depressotypic" developmental organization that may be a precursor to depressive illness.
Discussion of risk or protective factors	A broad set of risk factors, which can contribute to childhood depression, reaches across biology, evolution, and psychology.
Relevant Outcomes addressed	Outcomes of depressive disorders, including "aberrations in cognitive, socio-emotional, representational and biological domains."
Conclusions and Over-all Message	We must keep in mind the many varying developmental capacities of children as we treat depressive disorders.
Future needs, clinical significance	Preventive interventions for families with history of depression; increase social awareness to decrease social stigma.

* Protective factors considered

(Continues on next page)

Table 4 (continued)
Risk for Difficult Entry into School – Review Papers

Citation	Feagans 1983
Population Addressed	Children with learning disabilities.
Literature Reviewed, # articles	40.
Aims of article	To review the definition, research and treatment of "learning disabilities".
Discussion of risk or protective factors	Neurological, behavioral, and psychological problems.
Relevant Outcomes addressed	Lower scores on IQ tests, behavior or neurological difficulties, academic problems.
Conclusions and Over-all Message	We need to further define "learning disabilities," as well as develop new intervention strategies.
Future needs, clinical significance	More recent research involving multivariate statistics can address interaction of cognitive processes.
Citation	Fowler, Schwartz, and Atwater 1991
Population Addressed	Preschoolers in programs with special education.
Literature Reviewed, # articles	48.
Aims of article	To address the transition of preschoolers receiving special education services into kindergarten or alternative placements.
Discussion of risk or protective factors	Disabilities.
Relevant Outcomes addressed	"Positive" transition to school, success in kindergarten.
Conclusions and Over-all Message	Parent, child, teacher and caregiver roles must be well-coordinated to suit individual family needs.
Future needs, clinical significance	Future research needed to evaluate services and quality of transition, in addition to "satisfaction" data.
Citation	*Friedman 1990
Population Addressed	Children with psychiatric disorders.
Literature Reviewed, # articles	28.
Aims of article	To investigate the prevalence of psychiatric disorders in children and adolescents.
Discussion of risk or protective factors	Risk factors: Gender, parent-child attachment, influence of media, living environment and age as risk factors. Protective factors: interpersonal skills, attachment to nondeviant parent, good schools, high social cognitive skills.
Relevant Outcomes addressed	Childhood psychopathology and conduct disorders.
Conclusions and Over-all Message	Conduct and childhood psychiatric disorders are likely to increase given increasing risks.
Future needs, clinical significance	More emphasis on prevention efforts, especially on social, emotional, and economic supports for children and families.

* Protective factors considered

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Key to abbreviations

ELBW extremely low birth weight
LBW low birth weight

LD learning disability
SD standard deviation
SES socioeconomic status
VLBW very low birth weight

Table 4 (continued)
Risk for Difficult Entry into School – Review Papers

Citation	Hartup 1996
Population Addressed	Kindergarten – school age children.
Literature Reviewed, # articles	82.
Aims of article	To promote the investigation of quality of childhood friendships and how they affect child development.
Discussion of risk or protective factors	Strong/poor peer relations; friendship vs. non-friendship relations.
Relevant Outcomes addressed	School performance in kindergarten, attitudes toward school; reasoning/academic skills; psychosocial outcomes.
Conclusions and Over-all Message	Process-outcome studies are needed to tell us whether friends engage in better scaffolding than nonfriends.
Future needs, clinical significance	Friendship assessments deserve greater attention, and should include assessment of <i>quality</i> of relationships.
Citation	James 1997
Population Addressed	Immigrant children.
Literature Reviewed, # articles	21.
Aims of article	To address the psychosocial problems that immigrant children face in a new society, home and school.
Discussion of risk or protective factors	Moving/immigrating to a new country and society.
Relevant Outcomes addressed	Reduced ability to communicate and build relationships with friends and teachers; psychosocial problems in school (depression, confusion, stress).
Conclusions and Over-all Message	Schools need to better appreciate and prepare to assist in transition to school for immigrant children, targeting effective methods of stress reduction, "culture shock" reduction, developing positive social skills and school behaviors.
Future needs, clinical significance	Intervention/school-based programs are sorely needed to assist immigrant children in their transition to American society/school.
Citation	Lukeman and Melvin 1993
Population Addressed	Children born preterm.
Literature Reviewed, # articles	95.
Aims of article	To discuss the methodological problems of follow-up studies of preterm and low birth weight infants including selection of cases and controls, choice of outcome measure, and findings interpretations.
Discussion of risk or protective factors	Low birth weight and preterm status; multiparity, severity of neonatal illness, socio-environmental factors.
Relevant Outcomes addressed	Preexisting neurodevelopmental, social, emotional and behavioral problems can be exacerbated at school entry.
Conclusions and Over-all Message	At school entry, we need to be aware of social, cognitive, behavioral and emotional vulnerabilities in children born LBW/preterm, as well as to develop appropriate preschool interventions.
Future needs, clinical significance	It is difficult to predict outcomes in this population; there are many methodological issues to be considered and changed in future follow-up studies.

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Table 4 (continued)
Risk for Difficult Entry into School – Review Papers

Citation	McLoyd 1998
Population Addressed	SES-disadvantaged children.
Literature Reviewed, # articles	201.
Aims of article	To discuss recent research and future needs involving poverty and low SES effects on aspects of child development, such as cognitive functioning, academic success, and socioemotional strengths.
Discussion of risk or protective factors	Low SES, poor home environment and poverty.
Relevant Outcomes addressed	Child development: social skills, cognitive abilities, scholastic success/failure, behavior problems, emotional problems.
Conclusions and Over-all Message	The relation between low SES and poor child development is mediated by environmental and parenting risk factors. These, along with lower academic expectations from teachers, contribute to school failure for children of poverty.
Future needs, clinical significance	Many policy implications to consider: early interventions that would increase family income, as well as positively stimulate child's cognitive and behavioral development.
Citation	North et al. 1997
Population Addressed	Children with Neurofibromatosis type 1 (NF1).
Literature Reviewed, # articles	57.
Aims of article	To summarize current understandings of learning disabilities (LD) and cognitive deficits in children with NF1; to propose possible pathogenetic mechanisms.
Discussion of risk or protective factors	Children with NF1 are at high risk for LD.
Relevant Outcomes addressed	Lower IQ, Learning disabilities.
Conclusions and Over-all Message	Connection between NF1 and IQ remains controversial, though much has been learned in recent years. Risk of LD is high, and should be addressed with parents similarly to physical complications.
Future needs, clinical significance	Varying reports of trends or correlations between IQ and NF1 in children.
Citation	Ornstein et al. 1991
Population Addressed	Neonates.
Literature Reviewed, # articles	35.
Aims of article	To review neonatal follow-up studies that examine VLBW and ELBW child outcomes at school age; to examine differences in school age outcomes between VLBW and ELBW.
Discussion of risk or protective factors	Low or very low birth weight.
Relevant Outcomes addressed	School performance and cognitive capacity: Increased need for special education or remedial education placement.
Conclusions and Over-all Message	Need more long-term follow-up studies, tracking VLBW and ELBW children through school years in order to fully appreciate new groups of morbidities.
Future needs, clinical significance	Sound methodologies in research are needed to draw sound conclusions and inform new early intervention strategies.

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Table 4 (continued)
Risk for Difficult Entry into School – Review Papers

Citation	Patterson and Narrett 1990
Population Addressed	4–8 year-old oppositional children.
Literature Reviewed, # articles	25.
Aims of article	To discuss development of treatment strategies, measures, and the effectiveness of parent training.
Discussion of risk or protective factors	Oppositional behavior.
Relevant Outcomes addressed	Peer rejection, school failure.
Conclusions and Over-all Message	Need to be able to generalize effects of treatments for lasting results.
Future needs, clinical significance	Careful scrutiny of other psychosocial problems and treatments.
Citation	Richardson, Koller, and Katz 1986
Population Addressed	School-age children.
Literature Reviewed, # articles	37.
Aims of article	To review the literature on evidence that boys do not fare as well in school performance during first few years as girls do.
Discussion of risk or protective factors	Biological and social factors.
Relevant Outcomes addressed	School achievement and performance.
Conclusions and Over-all Message	Adult changes in sex roles may be filtering down to young children.
Future needs, clinical significance	Pediatricians should be aware of differences of school problems between girls and boys, and differences in responses to problems.
Citation	Rutter 1987
Population Addressed	Children.
Literature Reviewed, # articles	105.
Aims of article	To examine the role of cognition and cognitive deficits in the development of psychopathology.
Discussion of risk or protective factors	Biases and distortions in cognitive processing.
Relevant Outcomes addressed	Social and emotional malfunctioning.
Conclusions and Over-all Message	Biases may occur from earlier experiences, temperamental style, or cognitive deficits in information processing.
Future needs, clinical significance	Further study of cognitive processes in development needed to further clinical practices.

(Continues on next page)

Table 4 (continued)
Risk for Difficult Entry into School — Review Papers

Citation	Sethi and Trend 1996
Population Addressed	Children with special education needs by age 6.
Literature Reviewed, # articles	5.
Aims of article	Reviewed the identification of children with special education needs or evaluations.
Discussion of risk or protective factors	None addressed.
Relevant Outcomes addressed	Special education.
Conclusions and Over-all Message	Identifying children for special education before school-entry (age 6) is an important step in understanding risk and intervention needs.
Future needs, clinical significance	Districts need to address their own unique and sometimes avoidable problems with early identification of intervention/ special education needs.
Citation	Shapiro et al. 1984
Population Addressed	Preschoolers.
Literature Reviewed, # articles	49.
Aims of article	To discuss early detection of the "deviant neurologic substrate" as a risk factor for specific learning disability (SLD) prior to school entry.
Discussion of risk or protective factors	Neurologic exam before school entry instead of later academic underachievement.
Relevant Outcomes addressed	SLD diagnosis.
Conclusions and Over-all Message	Early detection could permit early intervention and assessment/therapy where indicated.
Future needs, clinical significance	Shifting focus from academic achievement to neurodevelopment will enhance detection of SLD before school.
Citation	Vohr and Msall 1997
Population Addressed	Low birth weight infants.
Literature Reviewed, # articles	106.
Aims of article	To investigate the measurement and quality of outcomes for the VLBW child in the context of school and family.
Discussion of risk or protective factors	VLBW, ELBW status.
Relevant Outcomes addressed	Kindergarten readiness, multiple domains of development.
Conclusions and Over-all Message	With increasing survival rates, there is more demand for special education resources for VLBW infants.
Future needs, clinical significance	Vigilant screening and monitoring of VLBW infants needs to continue as efforts are made to optimize positive long-term outcomes.

Table 5
Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Citation	Berlin et al. 1998
Sample/ Population	Approx. 1000 infants.
Study Design	Longitudinal, randomized trial of program effectiveness.
Risk/Protective Factor Identified	Low birth weight and premature infants.
Proposed mechanisms for risk-intervention	Intervention effects interacted with degree of low birth weight and family characteristics, esp. maternal education; also, quantity of services received, rate of program delivery and activity level of participation.
Type of Intervention	Infant Health and Development Program (IHDP), includes home visits, center care and parent groups.
Level of Intervention†	Selective.
Outcomes	Higher full scale and verbal IQ and decrease in behavior problems for heavier low birth weight at ages 5 and 8; family development.
Evidence of Clinical or Statistical Significance and Statistical Model	Standard deviation and test scores reported.
Measure of “effectiveness” of intervention	Cumulative risk, logistic regression, p values: decrease in size of intervention effects over time.
Citation	Campbell and Ramey 1994
Sample/ Population	57 randomly assigned children to intervention, 54 controls. (98% African American).
Study Design	Follow-up.
Risk/Protective Factor Identified	Low SES.
Proposed mechanisms for risk-intervention	Achievement and benefits of intervention increase as duration of intervention increases.
Type of Intervention	Carolina Abecedarian Project (1972–1977) – educational preschool and school-age intervention.
Level of Intervention†	Selective.
Outcomes	Intellectual development (WISC-R IQ) and educational achievement through age 12.
Evidence of Clinical or Statistical Significance and Statistical Model	MANOVA and factor analyses; children benefited more the longer they were enrolled in the intervention, and if they started intervention before school entry.
Measure of “effectiveness” of intervention	None .

†Universal = total population; Selective = at-risk populations; Indicated = children developing behavioral and academic problems

Key to abbreviations

ANCOVA analysis of covariance
ANOVA analysis of variance
CBCL Child Behavior Checklist

IHDL Infant Health and Development Program
MANOVA multiple analysis of variance
SES socioeconomic status
WISC-R Wechsler Intelligence Scale for Children – Revised

Table 5 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Citation	*Egeland and Hiester 1995
Sample/ Population	34 infants in day care and 52 home-reared, from high-risk impoverished families.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Quality of mother-infant attachment at 12 months and day-care status, day care = protective factor for securely attached infants.
Proposed mechanisms for risk-intervention	Security of attachment may influence later adaptation as well as day-care benefit.
Type of Intervention	Early day-care.
Level of Intervention†	Selective.
Outcomes	Child problem behaviors and adaptation: aggression, externalizing, withdrawn .
Evidence of Clinical or Statistical Significance and Statistical Model	Univariate ANCOVAs; day care had negative affect.
Measure of "effectiveness" of intervention	None.
Citation	Gordon and Jens 1988
Sample/ Population	"High risk" infants.
Study Design	Concept/decision-making model.
Risk/Protective Factor Identified	Risks in many, changing areas throughout early development.
Proposed mechanisms for risk-intervention	None proposed.
Type of Intervention	Risk assessment at several times during development, in several areas, weighing risks, and allowing for individual "movement" in and out of risk intervention.
Level of Intervention†	Selective.
Outcomes	Disorders of development and learning.
Evidence of Clinical or Statistical Significance and Statistical Model	No risk = T < 60 in all areas; mild risk = T score >60 in one area; moderate risk = T scores >60 in two or more areas, or >70 in one area; high risk = T scores >70 in two or more areas or >80 in one area.
Measure of "effectiveness" of intervention	None.

*Protective factors considered

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Table 5 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Citation	Hollomom and Scott 1998
Sample/ Population	299 Low birth weight and preterm infants and normal comparison group.
Study Design	Longitudinal follow-up.
Risk/Protective Factor Identified	Low birth weight, preterm delivery.
Proposed mechanisms for risk-intervention	CNS development.
Type of Intervention	From birth to age 3, pediatric follow-up, home visits, parent support groups, developmental curriculum 25 hrs/week at a center.
Level of Intervention†	Selective.
Outcomes	Academic success via achievement tests and special education placement status.
Evidence of Clinical or Statistical Significance and Statistical Model	One-way variance analyses, chi square.
Measure of "effectiveness" of intervention	Relative risk analyses: non-intervention low birth weight children were 3 times as likely as normal birth weight controls to receive special education services at age 9.
Citation	Horacek et al. 1987
Sample/ Population	N = 90 children identified pre-birth to be "at risk."
Study Design	Longitudinal, cohort.
Risk/Protective Factor Identified	Risk factor for school failure = maternal education, SES, and social variables pre-birth.
Proposed mechanisms for risk-intervention	None proposed.
Type of Intervention	Carolina Abecedarian Project: educational – degree and timing of preschool and/or school-age academic interventions.
Level of Intervention†	Selective.
Outcomes	School success or failure at kindergarten or grade 3, achievement test scores.
Evidence of Clinical or Statistical Significance and Statistical Model	Spearman rank correlation; grade failure rate decreases and achievement test scores increase as duration and intensity of intervention increases.
Measure of "effectiveness" of intervention	Mantel-Haenszel statistics (preschool intervention had stronger effect).
Citation	*Lee et al. 1990
Sample/ Population	646 black children from New Jersey and Oregon.
Study Design	Longitudinal follow-up study.
Risk/Protective Factor Identified	HeadStart, other preschool or no preschool.
Proposed mechanisms for risk-intervention	None proposed.
Type of Intervention	HeadStart: preschool program for disadvantaged black children.
Level of Intervention†	Selective.

*Protective factors considered

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Table 5 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Outcomes	Cognitive/ analytic ability gains after HeadStart .
Evidence of Clinical or Statistical Significance and Statistical Model	ANCOVA analyses; findings may be a general effect of preschool and not HeadStart in particular.
Measure of "effectiveness" of intervention	None.
Citation	Madden, O'Hara, and Levenstein 1984
Sample/ Population	71 families with children age 21–33 months at program entry, followed for nine years.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Low-income families.
Proposed mechanisms for risk-intervention	Short-term cognitive effects of interaction stimulation probably are not mediated by maternal behavior. Maternal behavior measured as overall verbal interaction or responsiveness may be too simply conceived, and does not appear to have an effect on long-term child cognition.
Type of Intervention	Mother-Child Home Program; to promote cognitively stimulating mother-child interactions as prevention for later school problems.
Level of Intervention†	Selective.
Outcomes	No detectable effects of intervention on first grade teacher ratings of school adjustment and performance. IQ and achievement scores near national norms.
Evidence of Clinical or Statistical Significance and Statistical Model	ANOVAs and ANCOVAs.
Measure of "effectiveness" of intervention	Large program effects found on maternal interaction styles: 51% to 33% greater frequency of desirable behavior.
Citation	McCarton et al. 1997
Sample/ Population	874 children followed-up at age 8.
Study Design	Follow-up of randomized controlled trial.
Risk/Protective Factor Identified	Low birth weight.
Proposed mechanisms for risk-intervention	Heavier low birth weight child may be more capable of adapting to environment because of more developed central nervous system.
Type of Intervention	The Infant Health and Development Program (IHDP).
Level of Intervention†	Selective.
Outcomes	Higher full-scale, performance and verbal IQ, math achievement, and receptive vocabulary scores for heavier low birthweightchildren only.
Evidence of Clinical or Statistical Significance and Statistical Model	T statistics and chi squares for categorical measures; multiple linear regression models for each outcome. Most significant intervention effects seen at age 3 years were not sustained to age 8 years.
Measure of "effectiveness" of intervention	None.

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Table 5 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Citation	McCormick et al. 1998
Sample/ Population	985 infants.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Low birth weight, premature birth.
Proposed mechanisms for risk-intervention	Program-specific mediating variables: maternal-infant interactions, home environment, parent problem solving skills, program participation; nonspecific mediating variables: maternal mental and physical health, family composition, neighborhood environment.
Type of Intervention	High-risk follow-up pediatric care (including developmental and social work surveillance); educational intervention (home visits, center-based care, parent support groups).
Level of Intervention†	Selective.
Outcomes	Cognitive (Stanford-Binet IQ) and social-emotional development, number of health conditions (mother reported Morbidity Index), and behavior problems (CBCL 2-3 and Richman-Graham Questionnaire) of child at 12, 24, 36, 60, 96 months .
Evidence of Clinical or Statistical Significance and Statistical Model	T-tests and percentile scores on measures.
Measure of "effectiveness" of intervention	Discussion and comparison of outcome score percentiles.
Citation	Oates et al. 1995
Sample/ Population	24 children attending therapeutic preschool over a three-year period from 1985–1988.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Child abuse.
Proposed mechanisms for risk-intervention	None proposed.
Type of Intervention	KEEPSAFE Project; therapeutic and educational preschool intervention.
Level of Intervention†	Selective.
Outcomes	Developmental gains, as measured by the McCarthy Scales of Children's Abilities and the Peabody Picture Vocabulary Test.
Evidence of Clinical or Statistical Significance and Statistical Model	T-test comparisons, percentiles. 79% of children were placed into public school system after the three year intervention (none were anticipated to be ready for public school).
Measure of "effectiveness" of intervention	None.
Citation	Ramey and Ramey 1998
Sample/ Population	985 low birth weight and premature infants.
Study Design	Randomized controlled trial.
Risk/Protective Factor Identified	Early intervention, low birth weight status.
Proposed mechanisms for risk-intervention	CNS development.
Type of Intervention	Abecedarian project, Project CARE, and Infant Health and Development Program – Multidisciplinary, designed to promote social competence and improve cognitive development in high-risk children.

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Table 5 (continued)
Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Level of Intervention†	Selective.
Outcomes	Cognition, IQ at age 3.
Evidence of Clinical or Statistical Significance and Statistical Model	Mean differences.
Measure of “effectiveness” of intervention	None.
Citation	Reynolds et al. 1996
Sample/ Population	360 low-income minority children.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Low SES, ethnicity.
Proposed mechanisms for risk-intervention	6th grade outcomes mediated by cognitive readiness at school entry and parent involvement in school.
Type of Intervention	Participants of the Chicago Longitudinal Study of Children at Risk, taking part in the Child Parent Center Programs with half-day preschool focusing on school achievement and readiness.
Level of Intervention†	Selective.
Outcomes	Significantly higher reading and math achievement and lower grade retention in sixth grade.
Evidence of Clinical or Statistical Significance and Statistical Model	Latent-variable structural modeling techniques and correlations..
Measure of “effectiveness” of intervention	Latent-variable modeling techniques for estimates of effects.
Citation	Tuakli-Williams and Carrillo 1995
Sample/ Population	100 preschool children aged 4 to 6 years.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Minority status; parental empowerment (as protective: important to success of program); psychosocial stressors (witnessing death, being homeless, familial violence); maltreatment.
Proposed mechanisms for risk-intervention	Stressed preschoolers exhibit emotional difficulties, reduced mood and attention span; stressed parents compound these problems through reduced supervision (borderline neglect), involvement, and poor communication.
Type of Intervention	Project CHILD (Community Health Initiatives Against Learning Difficulties).
Level of Intervention†	Selective.
Outcomes	Psychoeducational and medical outcomes: expressive language delay, sleep problems, shyness, withdrawal, depression.
Evidence of Clinical or Statistical Significance and Statistical Model	None.
Measure of “effectiveness” of intervention	None.

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Table 5 (continued)
Interventions That Decrease Risk for Difficult Entry into School – Specific Studies

Citation	Wasik et al. 1990
Sample/ Population	65 families with children at risk for cognitive difficulties, randomly assigned to 1 of 2 intervention groups or a control group.
Study Design	Longitudinal.
Risk/Protective Factor Identified	Low SES.
Proposed mechanisms for risk-intervention	Increases in scores for the home-based intervention group may be due in part to attendance at other day care.
Type of Intervention	Child Development Center Program (day care addressing cognitive and social development); Family Education Program (home-based care for parents – referrals, problem solving, basic child games using same materials as day care prevention).
Level of Intervention†	Selective.
Outcomes	Cognitive performance measured by Bayley Scales of Infant Development (6, 12, 18 months), Stanford-Binet IQ (24, 36, 48 months) and McCarthy Scales of Children's Abilities (at 30, 42, 54 months).
Evidence of Clinical or Statistical Significance and Statistical Model	Multivariate repeated-measures test; MANOVA, Tukey's studentized range test.
Measure of "effectiveness" of intervention	Comparisons of intervention and control group data.
Citation	Weikart 1998
Sample/ Population	123 African-American children.
Study Design	Longitudinal, follow-up.
Risk/Protective Factor Identified	Low SES, ethnicity.
Proposed mechanisms for risk-intervention	None.
Type of Intervention	High/Scope Perry active-learning preschool study intervention at ages 3–4 years (began 1962).
Level of Intervention†	Selective.
Outcomes	Social responsibility, economic status, marriage, educational performance at age 27.
Evidence of Clinical or Statistical Significance and Statistical Model	Cost/benefit analysis.
Measure of "effectiveness" of intervention	None.

Table 6
Interventions That Decrease Risk for Difficult Entry into School – Review Papers

Citation	*Belcher and Shinitzky 1998
Population Addressed	Children from birth to adolescence, at risk for <i>or</i> protected from development of substance abuse or involved in substance abuse prevention programs.
Literature Reviewed, # articles	113.
Aims of article	To review latest studies on risk and protective factors for substance abuse and effectiveness of prevention programs.
Discussion of risk or protective factors	Behavioral, emotional, and environmental factors (affect, genetics, community, family ecology, peer group = risk; positive home, parental support, good teacher relations, self-esteem -concept -control = protective).
Relevant Outcomes addressed	Preschool prevention efficacy.
Conclusions and Over-all Message	Many factors contribute to substance abuse and may be remedied through prevention/intervention programs.
Discussion of Clinical or Statistical Significance / Future needs	Early intervention strategies for preschool and elementary students underrepresented in literature.
Citation	Caplan 1980
Population Addressed	Children with psychiatric problems.
Literature Reviewed, # articles	38.
Aims of article	To present and discuss a model of primary prevention of child psychiatric illness.
Discussion of risk or protective factors	Genetic, biological and psychosocial risk factors, along with mediating variables, place a child along some continuum of risk.
Relevant Outcomes addressed	Mental disorders or mental retardation.
Conclusions and Over-all Message	Intervention and preventive efforts support the elements of Caplan's model (risk factor, mental disorder, intervening psychological stressors, current psychological competence, influence of social supports).
Discussion of Clinical or Statistical Significance / Future needs	Future interventions and research for children at psychiatric and developmental cognitive risk, crisis risk, and with social support needs.
Citation	Chamberlin 1987
Population Addressed	Children in early intervention programs.
Literature Reviewed, # articles	55.
Aims of article	To describe what have we learned from longitudinal studies (prediction of outcomes, expectations of early intervention programs).
Discussion of risk or protective factors	Before age 3: perinatal stress; then age 3–7: demographics (SES, maternal education, family size).
Relevant Outcomes addressed	IQ scores, school success/failure, neurophysical development, behavior and pre-delinquent acts.
Conclusions and Over-all Message	Studies have been inaccurate in using risk factors to identify or predict later problems or disability in individual children; good evidence for early intervention programs.
Discussion of Clinical or Statistical Significance / Future needs	Emphasize prevention, deliver basic parent education to all families; use community-wide screening/monitoring/referral systems.

*Protective factors considered

(Continues on next page)

Table 6 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Review Papers

Citation	Dudley et al. 1993
Population Addressed	VLBW infants.
Literature Reviewed, # articles	69.
Aims of article	To review current research on infant-focused, parent-focused and interactional programs; address issues for consulting psychiatrists.
Discussion of risk or protective factors	Premature, VLBW status.
Relevant Outcomes addressed	General child development.
Conclusions and Over-all Message	"the notion of infants at developmental risk needs to be supplemented by that of caregivers at risk . . ."
Discussion of Clinical or Statistical Significance / Future needs	Further investigate developmental outcomes as interventions target parent-child relationships and attachment.
Citation	Guralnick 1998
Population Addressed	Children at risk for mental disabilities.
Literature Reviewed, # articles	118.
Aims of article	To discuss the short- and long-term effects of early intervention, the mechanisms by which early interventions are influential, the relationships between mechanisms and systems of care, and the limits of intervention programs.
Discussion of risk or protective factors	Poverty, prematurity and low birth weight, parenting difficulties, abuse and neglect, prenatal exposure to drugs and alcohol and continuing exposure, hazardous/hostile environment.
Relevant Outcomes addressed	Mental disability.
Conclusions and Over-all Message	Long-term benefits need intensive interventions that span transition periods of child development; we need to further study the relations among child and family factors, program factors that define the interventions, and types of outcomes desired.
Discussion of Clinical or Statistical Significance / Future needs	Short term benefits of early intervention have highly reproducible effect sizes of .5 to .75 SD for children "at risk."
Citation	*Kaufmann and Dodge 1997
Population Addressed	Young children at risk, in need of early intervention.
Literature Reviewed, # articles	113.
Aims of article	To summarize major research on risk and protective factors for mental disorders in young children, identify successful prevention and intervention approaches, provide direction for future field interventions.
Discussion of risk or protective factors	Interventions should reduce risk factors and promote protective factors; should target multiple risk factors simultaneously and span individual, family, and community levels. Should focus on young children.
Relevant Outcomes addressed	Child psychopathology, health, academic success; general development and functioning
Conclusions and Over-all Message	Intervention effectiveness research needs to try to answer the question: "Is this preventive intervention effective for <i>these</i> children, in <i>this</i> family situation, located in <i>these</i> environmental conditions, using <i>these</i> program components?"
Discussion of Clinical or Statistical Significance / Future needs	Need more sophisticated approaches to prevention and early intervention, addressing multiple risk factors and protective factors simultaneously.

*Protective factors considered

(Continues on next page)

Table 6 (continued)

Interventions That Decrease Risk for Difficult Entry into School – Review Papers

Citation	McCormick et al. 1998
Population Addressed	Children in the Infant Health and Development Program (IHDP) from birth to 8 years old.
Literature Reviewed, # articles	135.
Aims of article	To summarize the data and conclusions published thus far from the IHDP, and report on information gathered at 8 years of age.
Discussion of risk or protective factors	Low birth weight, care-giving, maternal health and education, home environment, (discussion of program specific and non-program specific mediating variables).
Relevant Outcomes addressed	Child's cognitive development, health at later ages (5–8 years), behaviors and social-emotional development.
Conclusions and Over-all Message	Universal system of intervention may be best, as intervention benefited non-risk population as well.
Discussion of Clinical or Statistical Significance / Future needs	Odds ratios, cumulative risk.
Citation	Ramey and Ramey 1992
Population Addressed	Children from 3 early education intervention programs.
Literature Reviewed, # articles	18 (review of 3 programs).
Aims of article	To present findings addressing which children benefit more than others from early educational interventions and summarize new evidence of long-term benefits. (3 programs summarized: Abecedarian Project, Project CARE, and the IHDP).
Discussion of risk or protective factors	Having mother with low-IQ.
Relevant Outcomes addressed	School outcomes: intellectual measures, readiness and educational progress.
Conclusions and Over-all Message	Children of mothers with low-IQs benefit particularly from early intervention; early intervention benefits increase with intensity and duration of intervention, with new evidence for lasting benefits through early adolescence.
Discussion of Clinical or Statistical Significance / Future needs	Six essentials for early intervention programs are discussed for future program development.

Table 7. Additional Criteria of Excellence

Criteria	Number of risk plus intervention articles meeting criteria
Large, well-defined samples (>100)	31 + 11/64
Considerations of mechanisms of risk	22 + 11/64
Notation of causality (probable causal risk factor)	13 + 0/64 articles represented 7 sets of causal risk factors (cognitive deficits, early behavior problems, age at school entry, parental psychopathology, problematic parenting practices, difficulties with peers, difficulties with teachers)
Statistical indications of at least moderate clinical significance (e.g., Odds ratios > 2.2)	3 + 0/64

Paper 2

Resource Guide to Selected Federal Policies Affecting Children's Social and Emotional Development and Their Readiness for School

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Introduction

Efforts to improve services for young children and their families have become a high priority for the nation's leaders, including officials in the executive branches of federal and state governments, state legislatures, schools, professional associations, and philanthropic organizations. The enactment of the Goals 2000: Educate America Act in 1994 affirmed this national commitment to children's early development, articulated in the first goal that states "By the Year 2000, all children in America will start school ready to learn" (DOE, 1994). Three objectives that emphatically articulate both parental and national responsibility for all children support this overarching goal. These objectives include the following:

1. All children will have access to high quality and developmentally appropriate pre-school programs that help prepare children for school;
2. Every parent in the United States will be a child's first teacher and devote time each day to helping his or her pre-school child learn; and parents will have access to the training and support parents need;
3. Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain the mental alertness necessary for learning; and the number of low birthweight babies will be significantly reduced through enhanced prenatal health systems. (DOE, 1994)

These goals and objectives address the following five dimensions of early development and learning, as described by the National Education Goals Panel (NEGP):

1. physical well-being and motor development;
2. social and emotional development;
3. approaches to learning;
4. language development; and
5. cognition and general knowledge. (NEGP, 1994, p. 3)

The NEGP report notes that these "five dimensions are inextricably linked" (p. 4) and states that social and emotional development serve "as the foundation for relationships that give meaning to school experience" (p. 3). The NEGP defines emotional characteristics as those that involve the individual's feeling states regarding the self and others. It stresses that the personal well-being and self-confidence that allow a child to interact effectively with teachers and peers in school are built on positive, stable interactions with one or a few key caregivers in early childhood. These interactions provide the positive regard, unconditional love, and support that are the building blocks of healthy emotional development.

The federal government has made a significant investment in children's social and emotional well-being, yet now, in the year 2000, the first national edu-

cation goal has not been met, and too many children do not arrive at school "ready to learn." The missions of many federal agencies include components of a system of early childhood care. As Newacheck et al. (1998) report, between 1990 and 1994, the number of federal categorical programs funding children's services increased from 300 to nearly 500 programs. Although categorical programs allow government to respond directly to emerging needs, they also often differ in eligibility requirements, application processes, and length of participation. In an attempt to address the developmental risks in early childhood, the government has made a continuous investment of resources, resulting in a proliferation of federal agencies and programs related to the growth and development of young children and their readiness to learn. As a result, publicly funded services for young children and their families are often fragmented. This is particularly true for children who, because of exposure to multiple risk factors, receive services from numerous agencies and programs.

To address this problem, the Child Mental Health Foundations and Agencies Network initiated an examination of risk factors for problems in the transition to school and selected federal policies that affect these developmental risks. This resource guide to federal policies is a companion to "Risk Factors for Academic and Behavioral Problems at the Beginning of School," a paper by Lynne Huffman, Sarah Mehlinger, and Amy Kerivan in this publication. In that report, the authors reviewed scientific literature to identify factors that put a child at risk for poor transition to elementary school. That study discussed thirty-two risk factors in four categories: individual child, family and peers, child care and schools, and neighborhood and community.

This paper examines selected federal policies that address those identified risk factors. It groups federal policies into five domains: child health, early childhood care and education, family support and child welfare, child nutrition, and socioeconomic status. Some federal policies may be complementary, and some policies may overlap, illustrating not only the complexity of collaborative efforts on the part of the implementing agencies but also the diversity of partnerships supporting school readiness. However, the multiplicity of federal agencies addressing similar concerns creates difficulty in coordinating efforts to ensure that all children are ready to learn. Equally important are the gaps in federal policy and the inadequacy of programs to reach all children in need. Table 1 (on page 100–101) relates the federal policies to the risk factors in Huffman et al. (2000), and the Appendix presents summary tables of the selected federal policies discussed in this document.

Methodology

The purpose of this paper is to serve as a resource guide to selected federal policies and programs addressing specific factors that place a child at risk for a successful transition to school. The federal policies included in this guide represent five policy domains: child health, early childhood care and education, family support and child welfare, nutrition, and socioeconomic status. The authors selected them on the basis of each policy's relevance to the risk factors identified by Huffman et al. (2000), the amount of the federal budget appropriation, and/or the number of eligible individuals served. The authors reviewed federal legislation and regulations, other government documents, scientific papers, and reports. In addition, the authors conducted telephone interviews with 25 individuals knowledgeable about specific policies or policy areas.

The Child Mental Health Foundations and Agencies Network suggested the organizational structure for this paper, which includes identifying the history and mission, funding level, eligibility criteria, nature of the intervention, and intended outcomes and indicators for each policy. Readers should note that most of the policies discussed in this guide support services to children of all ages, and in some cases, adults as well. Often it was not possible to identify funding levels specific just to children from birth to six years of age. In those cases the total funding levels are reported. At the federal level, the identification of outcome measures and indicators is in an ongoing process of development in response to the Government Performance and Results Act of 1993. The information presented in this report is current as of May 2000. The dynamic, changing nature of public policy would require ongoing revision of this document to maintain it as an up-to-date resource.

Table 1**Risk Factors and Selected Federal Policies Affecting Children's Emotional and Social Development and Readiness for School**

Risk Factors*	Child Health							Early Childhood Care and Education							Family Support and Child Welfare				Child Nutrition		Socio-economic Status										
	MCHBG	Healthy Start	Medicaid	EPSDT	CHIP	SESS	CMHSBG	Head Start	Early Head Start	CCDBG	ESEA, Title 1, Part A	ESEA, Title 1, Part B, Even Start	IDEA Part B, State Grants	IDEA Part B, Preschool Grants	IDEA Part C	Family and Medical Leave Act	SSA, Title IV-B, Child Welfare Services	SSA, Title IV-B, Safe and Stable Families	CAPTA	SSA, Title XX, Social Services Block Grant	SSA, Title IV-E, Foster Care and Adoption	Adoption and Safe Families Act	Food Stamp Program	WIC	Child and Adult Care Food Program	TANF	SSI	EITC	DCTC		
Individual child																															
Low Birthweight and Neurodevelopmental Delay	•	•	•	•	•	•		•	•				•	•	•	•		•	•	•										•	
Other Medical Problems	•	•	•	•	•			•	•				•	•	•	•		•		•										•	
Cognitive Deficits	•	•				•		•	•	•	•	•	•	•	•						•	•									
Temperament and Personality Problems	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•							•	
Early Behavior and Adjustment Problems	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•							•	
Age at School Entry																															
Inadequate Nutrition	•	•						•	•			•												•	•	•					
Microsystems: Family and Peers																															
Family Composition																														•	
Low Level of Maternal Education						•		•	•			•																		•	
Parental Substance Abuse	•	•				•													•	•											
Parental Psychopathology	•	•				•	•												•	•										•	
Problematic Parenting Practices	•	•				•		•	•			•	•	•	•		•	•	•	•	•	•	•								
Child Maltreatment			•	•	•	•											•	•	•	•	•	•	•								
Insecure Attachment	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•								
Difficulties with Peer Relationships						•		•	•	•	•	•	•	•	•						•										

Continues on next page.

Table 1 (continued)

Risk Factors and Selected Federal Policies Affecting Children's Emotional and Social Development and Readiness for School

Risk Factors*	Child Health						Early Childhood Care and Education						Family Support and Child Welfare				Child Nutrition		Socio-economic Status												
	MCHBG	Healthy Start	Medicaid	EPSDT	CHIP	SESS	CMHSBG	Head Start	Early Head Start	CCDBG	ESEA, Title 1, Part A	ESEA, Title 1, Part B, Even Start	IDEA Part B, State Grants	IDEA Part B, Preschool Grants	IDEA Part C	Family and Medical Leave Act	SSA, Title IV-B, Child Welfare Services	SSA, Title IV-B, Safe and Stable Families	CAPTA	SSA, Title XX, Social Services Block Grant	SSA, Title IV-E, Foster Care and Adoption	Adoption and Safe Families Act	Food Stamp Program	WIC	Child and Adult Care Food Program	TANF	SSI	EITC	DCTC		
Microsystems: Day Care and School																															
Non-maternal Care						•		•	•	•	•	•	•	•	•		•			•				•						•	
Relationships with Teachers						•		•	•	•	•	•	•	•	•					•											
Exosystem: Neighborhood, Community, and Socioeconomic Status																															
Immigrant Status**																							•				•	•			
Minority Status**																							•				•	•			
Low Socioeconomic Status	•	•	•	•	•	•		•	•	•	•	•								•	•	•	•	•	•	•	•	•	•	•	

*A • indicates the policy affects the risk factor.

**The risk factors of immigrant and minority status identified by Dr. Huffman are interrelated with low socioeconomic status and, with three exceptions, cannot be meaningfully separated for the purposes of this analysis. For the immigrant status risk factor, the interaction with policies identified here indicates possible negative effects, including exclusion from program eligibility, because of immigrant status.

Selected Federal Policies

Child Health

Introduction

Quality, affordable health care is a universal need of all young children and their families. The health of mothers and their children has been of public concern for decades. Currently the child health care system is one of the most discussed and rapidly changing areas of federal policy. This section describes seven key components of this system: the Maternal and Child Health Services Block Grant (MCHBG); Healthy Start; Medicaid; Early and Periodic Screening, Diagnosis, and Treatment (EPSDT); the State Children's Health Insurance Program (CHIP); Starting Early Starting Smart (SESS); and the Community Mental Health Services Block Grant (CMHSBG) Program. Table 2 on the next page presents the interaction of these policies with the four major types of risk factors identified for emotional and social development and school readiness (Huffman et al., 2000).

Social Security Act, Title V: Maternal and Child Health Block Grant

History and Mission

The mission of the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (DHHS) is "to provide leadership, partnership, and resources to advance the health of all the nation's mothers, infants, children, and adolescents including families with low-income levels, diverse racial and ethnic heritage, and those living in rural or isolated areas without access to care" (MCHB, 1998a, p. 1).

Currently, MCHB administers four major programs that in fiscal year (FY) 1997 had a total budget of \$825 million: the MCHBG (Title V) funded in FY 1997 at \$681 million; the Healthy Start Initiative funded at \$96 million; the Emergency Medical Services for Children Program funded at \$12.5 million; and the Ryan White Comprehensive AIDS Resources Emergency Act of 1990 and Title IV of the Ryan White CARE Act, funded for FY 1997 at \$36 million. Of these programs, the MCHBG and the Healthy Start Initiative relate most directly to the emotional development of young children.

MCHB's principal program, the MCHBG, is "charged with the primary responsibility for promoting, providing, and assuring the health of the nation's mothers and children. It is an essential framework which states use to build and maintain their systems of care for children and pregnant women" (MCHB, 1998a, p. 1). The MCHBG has three components: Formula Block Grants to 59

Table 2
Risk Factors and Selected Federal Child Health Policies Affecting Children's Emotional and Social Development and Readiness for School

Risk Factors	Child Health Policies						
	MCHBG	Healthy Start	Medicaid	EPSDT	CHIP	SESS	CMHSBG
Individual Child	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	T, D
Microsystems:							
Family and Peers	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	T, D
Day Care and School	NA	NA	NA	NA	NA	P, I	NA
Exosystem:							
Neighborhood, Community, and Socioeconomic Status	T, I	T, I	T, I	T, I	T, I	T, I	NA

This table presents the interaction of each of the policies listed at the top of the columns with the four major categories for risk factors (individual child, family and peers, day care and school, and neighborhood, community, and socioeconomic status) identified as influencing social and emotional development and school readiness. Each column refers to the legislative language of the policy. The codes used to indicate the policy's interaction with the risk factors are as follows:

- P** denotes *prevention* services, while **T** indicates *treatment* services. Both codes appear if a policy has the potential to deliver both prevention and treatment services. Prevention services include those that would be considered either universal or selective in the Institute of Medicine taxonomy.
- D** denotes a *direct* effect on the risk factors, while **I** indicates an *indirect* effect. Both codes appear if a policy may have both direct and indirect effects.
- NA** indicates *not applicable*.

states and territories; Special Projects of Regional or National Significance; and Community Integrated Services Systems Grants (MCHB, 1998a; Association of Maternal and Child Health Programs, 1999a). The mission of the MCHBG is to enable each state to provide, promote, and ensure services in two major areas: prevention and primary health care for women and children and services for children with special health care needs.

For women and children, the MCHBG goals are to:

- provide for and ensure that mothers and children (especially from low-income families or those with limited availability of health services) have access to quality maternal and child health services;
- reduce infant mortality and the incidence of preventable diseases and handicapping conditions among children;
- reduce the need for inpatient and long-term care services;
- increase the number of children (especially pre-school children) appropriately immunized against disease and the number of low-income children receiving health assessment and follow-up diagnostic and treatment services;
- promote the health of mothers and infants by providing prenatal, delivery, and postpartum care for low-income, at-risk pregnant women; and,

- promote the health of children by providing preventive and primary care services for low-income children (MCHB, 1998a).

For children with special health care needs, the MCHBG goals are to:

- provide rehabilitation services for blind and disabled individuals under the age of 16 receiving benefits under Title XVI, Supplemental Security Income (SSI), to the extent medical assistance for such services is not provided under Title XIX, Medicaid; and,
- provide and promote family centered, community-based, coordinated care for children with special health care needs and facilitate the development of community-based systems of services for such children and their families (Committee on Ways and Means, 1995).

The second part of the MCHBG funds the Special Projects of Regional or National Significance (SPRANS). This program provides for special projects of significance in the following areas:

- training of health and health related personnel in the areas of maternal and child health and services for children with special health care needs;
- research designed to improve the delivery of services for mothers, children, and children with special health care needs;
- genetic disease testing, counseling, information development and dissemination, and newborn screening for genetic disorders;
- hemophilia diagnosis and treatment; and,
- other special improvement projects that address expansion or improvement of health care services, including early intervention for mothers and children with special health care needs (HRSA, 1999; Health Care Financing Administration [HCFA], 1999c).

The third section of the MCHBG supports the Community Integrated Services Systems Grants, which provide for the development and expansion of cohesive maternal and child health service delivery systems.

Eligibility

States decide eligibility for MCHBG supported programs and services (Committee on Ways and Means, 1995). Services delivered under the MCHBG target those mothers and children with low-income or with limited availability of health services, as well as children with special health care needs, particularly those from low-income families (Section 501 of Title V of the Social Security Act).

Nature of the Intervention

The MCHBG may be used to deliver a range of services focused on two major areas: prevention and primary health care for women, children, and adolescents; and services to children with special health care needs and their families. By law, at least 30 percent of MCHBG funds must be used for children with special health care needs. The following services are offered.

For prevention and primary care services for women and children:

- maternal and infant health home visiting programs to pregnant women or families with an infant up to the age of one, including case management services, health education services, and related social support services;

- maternal and child health centers that provide prenatal, delivery, and postpartum care for pregnant women and preventive and primary care services for infants up to age one;
- comprehensive care for women before, during, and after pregnancy and childbirth;
- preventive and primary care services for children and adolescents;
- immunization programs;
- lead poisoning prevention;
- adolescent pregnancy prevention programs;
- injury and violence prevention programs;
- nutritional and developmental needs of mothers, children, and families; and,
- integration of national standards and guidelines for prenatal care; healthy and safe child care; and the health supervision of infants, children, and adolescents.

For children with special health care needs:

- early identification and early intervention activities such as newborn screening; home visiting to families with at-risk children; and multidisciplinary interventions such as those under Part C of the Individuals with Disabilities Education Act (IDEA);
- comprehensive care for children and adolescents with special health care needs; and,
- toll free information and referral phone lines that help families find the care they need (HRSA, 1999; Association of Maternal and Child Health Programs, 1999a).

In 1996, 18.8 million women, children, and youth received MCHBG services, up from 11.7 million in 1992.

The law requires that MCHBG programs work with Medicaid and other federal programs to provide outreach to families and help them enroll for needed services. A number of states transfer all or some of the MCHBG funds for children with special health care needs (CSHCN) to the state Medicaid program for administration. In approximately 5 percent of the states, maternal and child health (MCH) programs have administered the EPSDT program for Medicaid, and in most other states MCH programs have responsibility for some EPSDT components. These efforts help to coordinate services and reduce health care and special education costs for families and taxpayers. Title V is the lead agency for the Individuals with Disabilities Education Act (IDEA) Part C in 18 states (Association of Maternal and Child Health Programs, 1999a). However, according to the Association of Maternal and Child Health Programs (1996a), Title V programs provide, fund, and coordinate services for only a million out of the 12 million children with special health care needs. The MCHBG also provides funds for the training of public health professionals in the field of maternal and child health.

Intended Outcomes/Indicators The MCHB has developed a set of national core performance measures for the MCHBG. The measures follow.

For primary care services for women, children, and adolescents:

- the percentage of very low birthweight live births;
- the percentage of very low birthweight infants delivered at facilities for high-risk deliveries and neonates;
- the percentage of infants born to pregnant women receiving prenatal care beginning in the first trimester;
- the percentage of mothers who breastfeed their infants at hospital discharge;
- the percentage of newborns who have been screened for hearing impairment before hospital discharge;
- the percentage of newborns in the state with at least one screening for each of PKU (phenylketonuria), hypothyroidism, galactosemia, and hemoglobinopathies (e.g., the sickle cell diseases, combined);
- the percentage of children through age two who have completed immunizations for measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, hemophilus influenza, and hepatitis B;
- the birth rate (per 1000) for teenagers ages 15 through 17 years;
- the rate of deaths of children ages 1 to 14 caused by motor vehicle crashes per 100,000 children;
- the percentage of children without health insurance; and,
- the percentage of potentially Medicaid eligible children who have received a service paid by the Medicaid program (MCHB, 2000).

For children with special health care needs:

- the percentage of state SSI beneficiaries less than 16 years old receiving rehabilitative services from the state CSHCN program;
- the degree to which the CSHCN program provides or pays for specialty and subspecialty services, including care coordination, not otherwise accessible or affordable to its clients;
- the percentage of children with special health care needs in the state who have a "medical home";
- the percentage of children with special health care needs in the state CSHCN program with a source of insurance for primary and specialty care; and,
- the degree to which the state ensures family participation in program and policy activities in the state CSHCN program (MCHB, 2000).

Analysis

Targeted Risk Factors. MCHBG activities seek to ensure the general physical and mental health of the child and parent, thereby positively contributing to the child's cognitive and emotional development. Traditionally, federal/state partnerships have used MCHBG dollars to develop service systems that may address a number of important risk factors including: neurodevelopmental delay; low birthweight, and other medical problems; prevention of cognitive deficits and learning problems; temperament, personality, early behavior, or adjustment problems; inadequate nutrition; problematic parenting practices; insecure attachment; and low socioeconomic status.

Discussion. Expanded insurance coverage for low-income children coupled with a shift to managed care environments presents both opportunities and challenges to traditional MCHBG prevention and primary care services. While some traditional MCH clients will now receive services through the State Children's Health Insurance Program (CHIP), there is a need for the MCHB to assist in CHIP enrollment efforts while simultaneously maintaining a flexible safety net of services for the remaining uninsured population.

The potential of MCHBG's changing role in direct service provision may present opportunities to redirect some Title V resources to ensure access to quality health care, to promote the capacity of the health care delivery system to provide timely and appropriate prenatal care, and to prevent childhood disabling diseases and injuries. MCHBG dollars may be used to provide uncovered or wraparound services such as respite care and access to health care for uninsured or underinsured families. MCHBG dollars may also be more available for addressing population based health issues and for enabling MCH state programs to take a leading role in integrating services delivered through managed care organizations, education and social services in order to provide a continuum of services to children with special health care needs and their families.

Healthy Start

History and Mission

Healthy Start, a program under the Public Health Services Act, is also administered by the MCHB. Planned as a five-year demonstration program, the Healthy Start initiative began in 1991 with 15 communities awarded Healthy Start grants. Although the demonstration period has ended, the government has continued funding Healthy Start. In FY 1997, year seven of the project, the government funded Healthy Start at \$96 million. The program builds on the principles of innovation, community commitment and involvement, increased access, service integration, and personal responsibility (MCHB, 1998c). While Healthy Start funds the development of programs and strategies aimed primarily at the reduction of infant mortality in targeted high-risk communities, it also aims to address other outcomes such as the reduction of low birthweight babies, improved maternal health, and increased community awareness of threats to infant health (General Accounting Office [GAO], 1998).

Healthy Start relies on community-based collaborative efforts to provide comprehensive health and social support services, as well as individual and community development activities in order to:

- develop a comprehensive package for perinatal care services, including preconception and family planning counseling services, prenatal and postpartum care, immunizations, and well-baby care;
- make health and social support services more accessible by streamlining eligibility processes, developing one-stop shopping centers, providing transportation to care, and facilitating on-site child care;

- make available an appropriate array of self-help programs and services such as nutrition, counseling, smoking cessation, substance abuse, and mental health counseling and treatment;
- supply case management services to facilitate the entry and follow-up of at-risk women into appropriate services and programs;
- employ outreach workers, often from the neighborhood, to locate and educate women and their families about the importance of early and regular prenatal care;
- improve participation of eligible women, children, and their families in programs such as Medicaid; EPSDT; Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); Food Stamps; and public housing;
- increase the cultural sensitivity of local providers;
- implement programs and activities targeting special needs of adolescents, including school-based health services, self-esteem enhancement, violence prevention, mentorship, and recreational programs;
- provide educational, job training, and employment opportunities; and,
- strengthen local leadership, capacity, and resources through training and actively engaging community members in program development (MCHB, 1998c).

Eligibility

Each participating state decides eligibility. Many states base Healthy Start eligibility on family gross income; however, in several states there is no asset test. Families with higher incomes may qualify for Healthy Start services if they have child care or work related or medical expenses. Women, infants, and children are deemed at risk as a result of inadequate nutrition, smoking, or use of other drugs. Several states indicate that Healthy Start is a medical assistance program covering low-income, uninsured pregnant women and children born after September 30, 1983. Healthy Start covers most babies until they are one year of age even if the family's income increases (MCHB, 1998c).

Nature of the Intervention

Healthy Start is a model for early childhood intervention that arose from prenatal, nursing, and public health research. It is based on the premise that successful mother-infant bonding is important for the prevention of future parenting and child disturbances. Services may include prenatal screening for medical and psychosocial risks, home visits, spouse abuse services, respite care/day care, substance abuse treatment, housing assistance, medical services, and child/family support services. According to the MCHB (1998c), Healthy Start program components include providing a quiet place for the delivery of the baby; encouraging the presence of the father or supportive person; nurturing the mother immediately after delivery so that she is better able to bond with her baby; and supporting educational and skills development interventions during the postpartum period, either in hospitals or in the home. Generally, the Healthy Start program raises awareness about infant mortality, promotes healthy behaviors, and motivates mothers to enter prenatal care early. Healthy Start provides essential support services, including outreach and participant identification (i.e., case finding), nutritional support and education, smoking cessation, psychosocial counseling, breastfeeding, parenting support and education, and home visits. Healthy Start provides these services based on the client's need and on state defined availability of resources.

Intended Outcomes/Indicators Healthy Start's principal outcome goal is a 50 percent reduction in infant mortality attributable to the program over a five-year period. HRSA officials have acknowledged, however, that this goal was intended to be motivational. The program also aims to achieve improvements in the reduction of low birthweight babies, improved maternal health, and increased community awareness of threats to infant health (GAO, 1998).

The GAO (1998) report states that HRSA contracted with Mathematica Policy Research, Inc., in 1993 to conduct an extensive outcomes and process oriented national evaluation of the first five years of the demonstration in the 15 original Healthy Start communities to expand knowledge, appraise diverse interventions, and assess their effectiveness across distinct populations. A fall 1997 draft of a preliminary evaluation report found that participation in Healthy Start was not associated with reductions in low or very low birthweight or preterm birth rates. However, the GAO (1998) report cautioned that the preliminary evaluation results were not conclusive. In response to that GAO study, HRSA has added funds to analyze Year six data. The final report is delayed because of data availability problems and HRSA's desire to analyze additional data.

Analysis

Targeted Risk Factors. The Healthy Start program has the potential to address a number of risk factors including neurodevelopmental delay, low birthweight, other medical problems, cognitive deficits and learning problems, temperament and personality problems, early behavior and adjustment problems, inadequate nutrition, problematic parenting practices, insecure attachment, parental mental illness or substance abuse, and socioeconomic disadvantage.

Discussion. Healthy Start is an example of a demonstration program, a vehicle often used by the federal government to develop and evaluate models of service delivery that encompass many elements believed to make a difference in outcomes. Developers designed Healthy Start to demonstrate how a program based on innovation, community commitment and involvement, increased access to care, service integration, and personal responsibility could work in a variety of locations with high infant mortality (GAO, 1998). Findings to date are inconclusive in part because of problems and delays in the evaluation of the first five years.

The Healthy Start evaluation process sheds light on common problems evaluators face in this type of study, such as delayed program implementation, difficulty obtaining data, insufficient data, data cleaning issues, and the challenges of cross-site evaluation. The final evaluation report will discuss whether the Healthy Start model reduces some of the risk factors which may affect a child's healthy emotional and social development.

Social Security Act, Title XIX: Medicaid

History and Mission

The government established the Medicaid program, codified as Title XIX of the Social Security Act, in 1965. Administered by HCFA, it is a jointly funded, cooperative venture between federal and state governments that provides access to health insurance to eligible children and adults.

The government initially formulated Medicaid as a medical care extension of federally funded programs providing cash assistance to the poor. Over the years, however, Medicaid eligibility has expanded incrementally beyond its original ties with eligibility for cash welfare programs. In 1997, Medicaid provided health care assistance to 40.6 million Americans at a cost of \$161.2 billion dollars (Kaiser Commission on Medicaid and the Uninsured, 1999a).

The Medicaid Program, which in 1997 covered 21 million children, equal to 25 percent of all American children (Kaiser Commission on Medicaid and the Uninsured, 1999a; Children's Defense Fund [CDF], 1998), is the largest single program for children's health care in the nation, insuring both low-income and disabled children. The Kaiser Commission on the Future of Medicaid (1997) reported that Medicaid covers nearly 33 percent of the nation's infants and 29 percent of all children ages one to five. As the result of Medicaid expansions, nearly 60 percent of Medicaid covered children live in low-income families where at least one parent is working. This number may increase substantially because of Medicaid expansions resulting from the passage of CHIP established by the Balanced Budget Act (BBA) of 1997.

Under Medicaid, the federal government reimburses state expenditures for medical services at state specific rates that may not be lower than 50 or higher than 83 percent, with poorer states receiving a higher rate than wealthier states. The federal government usually matches administrative expenses at a rate of 50 percent (Kaiser Commission on Medicaid and the Uninsured, 1999b).

Eligibility

States have broad latitude in determining which groups their Medicaid programs will cover. According to HCFA (1999b), mandatory Medicaid "categorically needy" eligibility groups for which the federal government provides matching funds include the following:

- pregnant women whose family income is below 133 percent of the federal poverty level (FPL). However, Medicaid limits services to these women to those related to pregnancy, complications from pregnancy, delivery, and postpartum care;
- children under the age of six whose family income is at or below 133 percent of the FPL;
- individuals who met the requirements for the Aid to Families with Dependent Children (AFDC) program that were in effect in their state on July 16, 1996, or, at state option, more liberal criteria;
- recipients of adoption or foster care assistance under Title IV of the Social Security Act;
- all children born after September 30, 1983, in families with incomes at or below the FPL (this phases in coverage so that by the year 2002, all poor children under age 19 will be covered);
- special protected groups (typically individuals who lose their cash assistance because of increased income from work or from Social Security benefits, but who may keep Medicaid for a period of time);
- SSI recipients in most states (some states use more restrictive Medicaid eligibility requirements that predate SSI); and,
- certain Medicare beneficiaries (Waid, 1998).

States also have the option of providing Medicaid coverage for other "categorically related" groups. These optional groups share the characteristics of the mandatory groups, but with somewhat more liberally defined eligibility criteria. The broadest optional groups that may include children and adolescents for whom states will receive federal matching funds for Medicaid coverage include the following:

- infants up to age one and pregnant women whose family income is no more than 185 percent of the FPL;¹
- children under age 21 who meet what were the AFDC income and resources requirements in effect in their state on July 16, 1996 (even though they do not meet the mandatory eligibility requirements);
- institutionalized individuals eligible under a "special income level"² up to 300 percent of the SSI federal benefits rate;
- individuals who would be eligible if institutionalized, but who are receiving care under home and community-based services waivers;
- recipients of state supplemental income payments;
- "optional targeted low-income children" included within the Medicaid expansions under CHIP; and,
- "medically needy" persons³ (Waid, 1998).

The Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 [TEFRA, P.L. 97-248] gives states the option to extend regular Medicaid coverage to certain disabled children under age 18 who were living at home and would be eligible for SSI if they were hospitalized, in a nursing facility, or in an intermediate care facility for the mentally retarded. TEFRA permits states to consider only the child's income and resources rather than those of the parents when determining eligibility. A state that uses the TEFRA option must determine that (1) the child requires the level of care provided in an institution; (2) it is appropriate to provide such care outside an institution; and (3) the Medicaid cost of care at home is no more than Medicaid would pay for the institutional care for the child (Congressional Research Service, 1993).

The 1996 federal welfare reform law, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), gives states the option of providing Medicaid to some legal immigrants in the United States. However, immigrants who entered the United States after August 1996 were barred from receiving Medicaid for five years (CDF, 1998).

The Balanced Budget Act (BBA) of 1997 included two provisions that give states additional options of increasing children's health care coverage through the Medicaid program (HCFA, 1999b). The first option, presumptive eligibility for low-income children,⁴ allows certain "qualified entities"⁵ to enroll children under age 19 in Medicaid on a temporary basis if they appear to be eligible based on age and family income. Currently, the law does not limit children to one period of presumptive eligibility; however, this is under study.

The second option, the 12 month continuous eligibility, allows states to guarantee up to 12 months of coverage to children enrolled in Medicaid even if a child experiences changes in family income or other circumstances that would

make the child ineligible for Medicaid during the 12 month period. A state may place an age limit on the children eligible for continuous eligibility; however, the state must cover all children who the state determines are eligible under the state plan. CHIP also gives states the opportunity to expand Medicaid coverage for children.

Nature of the Intervention

In order for a state to receive federal matching funds, Medicaid legislation requires that the state must offer certain basic services to the categorically needy population in any state program (HCFA, 1998). These basic services include:

- in-patient and out-patient hospital services;
- physician services;
- medical and surgical dental services;
- home health care for persons eligible for nursing facility services;
- family planning services and supplies;
- laboratory and X-ray services;
- pediatric and family nurse-practitioner services;
- nurse-midwife services (to the extent authorized under state law);
- federally qualified health center services and other ambulatory services offered by a federally qualified health center that are otherwise covered under the state plan;
- EPSDT;
- nursing facility services for those age 21 or older; and,
- rural health clinic services and any other ambulatory services offered by rural health clinics that are otherwise covered by the state plan.

Services that are optional for some populations must be provided, if needed, to children. These services include the following:

- clinic services;
- nursing facility services for those under age 21;
- intermediate care facilities for the mentally retarded;
- optometrist services and eyeglasses;
- prescribed drugs;
- tuberculosis related services for TB infected persons;
- prosthetic devices;
- dental services; and,
- rehabilitation services.⁶

Each state has relatively broad discretion in determining the organization, financing, and delivery of all Medicaid services. As Scanlon (1999) states, "Within national guidelines provided by the federal government, each state establishes its own eligibility standards; determines the type, amount, duration, and scope of services; sets the rate of payment for services; and administers its own program. Each state and territory has different rules and regulations, different management controls, and different data systems, so in effect there are 56 different Medicaid programs."

The BBA of 1997 provides states with even more autonomy. However, Medicaid must provide health care services identified under the EPSDT program as

being "medically necessary" for eligible children even if those services are not included as part of the covered services in that state's plan. There is no longer a requirement for state-by-state waivers from the Medicaid law that had formerly been required and that had been used by HCFA to protect quality or access to care or to resolve particularly serious problems with states. Therefore, HCFA may now have much less oversight of the Medicaid program. The BBA still requires waivers for some special populations, including children with disabilities, children in foster care or out-of-home placement, or children receiving adoption assistance under Title IV-E. The BBA did require HCFA to issue quality assessment and improvement standards that the states must follow.

Intended Outcomes/Indicators The DHHS did not include specific performance measures related to the Medicaid program in its Strategic Plan (DHHS, 1997b) because of DHHS's commitment to consult with states prior to their inclusion. The Strategic Plan states that DHHS intends to develop performance measures relating to access and quality of care as well as to measure the impact of children's initiatives on reducing the number of uninsured children.

Analysis

Targeted Risk Factors. Medicaid is a public insurance program that provides medical and behavioral health care services that may address a number of risk factors, such as neurodevelopmental delay, low birthweight, and other medical problems. Medicaid provides behavioral health care services that may address temperament, personality, and early behavior or adjustment problems in young children. Medicaid services may also address medical or behavioral problems arising from insecure attachment, child maltreatment, parental mental illness, and parental substance abuse problems. Because of its income limitations, Medicaid responds to health problems in socioeconomically disadvantaged families.

Discussion. Outreach and enrollment of Medicaid eligible children and youth continue to present concerns. An estimated three million children who are eligible for Medicaid are not enrolled. The DHHS's Strategic Plan (1997b) states that the DHHS is mounting an unprecedented effort to work with states, institutions, and organizations to address the problem. Ongoing efforts to enroll children in CHIP will also address this problem because of the requirement to enroll all children eligible for Medicaid into that program first.

Medicaid closely interacts with a number of other federal programs. The law requires that Medicaid agencies coordinate with MCH programs and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). They are also encouraged to coordinate with child care and Head Start agencies, state and local education authorities, and social service agencies (Waid, 1998). Medicaid has the lead role in the provision of medically necessary services under IDEA. This, coupled with its traditional partnership with Title V and its expanding role through CHIP, makes Medicaid an essential element of the service delivery system for many young children and their families. However, some parents may no longer be covered under Medicaid.

For the past several years, the Medicaid program has been going through revolutionary changes. The introduction and adoption of managed care techniques, originally devised in the private sector to control commercial insurance

costs, has affected not only the Medicaid health care delivery system but, for many young children, services financed by other federal programs such as Title V and IDEA as well. The growth of managed Medicaid has been swift and continues to expand. In 1991, 2.7 million (9.5 percent) of the 28.3 million Medicaid recipients were enrolled in managed care plans (National Center for Policy Analysis, 1995). In 1996, more than 40 percent or 13.3 million beneficiaries were enrolled in managed care (CDF, 1998). In 1998, Fox and colleagues estimated that 47 percent of Medicaid beneficiaries were enrolled in managed care.

Greater flexibility in the use of Medicaid funds at the state level accompanied the Medicaid managed care era. Waivers to the federal Medicaid regulations pushed policy-making functions to the state or sub-state levels. Recent changes eliminating the need to obtain federal waivers strengthen the states' control over program resources even more.

State Medicaid contracts with managed care organizations have become important policy making documents. Several contractual factors that may influence managed care's effect on young children and their families include capitation rates, risk arrangements, provider networks, medical necessity criteria, requirements to deliver expensive treatment services, incentives, penalties, and performance standards. For some managed care organizations, inexperience with the needs of public sector children and families, a focus on an "identified patient," and little incentive for long term investment because of short patient retention and time limited contract periods may also be factors.

A state's decision to exclude some Medicaid services from the managed care contract can actually increase fragmentation in the system. In a study of Medicaid managed care, Fox (1997) pointed out that all but two states that use fully capitated managed care contracts chose to exclude at least some Medicaid services from the contract and reimbursed these services separately. About 75 percent of the states carved out mental health services, while 66 percent carved-out health related special education services and 45 percent of the states carved-out services provided under the early intervention program to children under three years of age who are developmentally delayed. Specialty services furnished by Title V were less likely to be excluded from managed care contracts because Title V services have historically been included in state Medicaid budgets and were most often seen as medically necessary. Fox (1997) states that while these service carve-outs may address some concerns such as the capacity of the managed care organizations and the maintenance of a safety net of specialized services, these carve-outs, especially for mental health services, make it difficult to integrate physical health, mental health, and developmental services for children.

In a survey of all the states, Pires, Armstrong, and Stroul (1999) report that 95 percent of all state managed care reforms do include coverage of behavioral health services for infants, toddlers, and preschool children and their families. They found no difference in carve-outs versus integrated plans. However, the survey did not address whether behavioral health care services are actually being delivered. An impact analysis of managed care (Stroul et al. 1998) reported that few, if any, behavioral health services were being delivered to young children and their families. Barriers included the managed care organization's general lack of knowledge and expertise about behavioral health problems and effective inter-

ventions for this population as well as a tendency for managed care plans to focus on the identified patient rather than on the family unit.

There are few studies of the impact of managed care on young children's behavioral health care. An ongoing Substance Abuse and Mental Health Services Administration (SAMHSA) study examining the impact of managed behavioral health care in the public sector is the largest study of its kind. While this study looks at services for seriously emotionally disturbed children and substance abuse treatment services for adolescents, it does not focus on the effects of Medicaid managed care on children from birth to six years of age.

Early and Periodic Screening, Diagnosis, and Treatment Program

History and Mission

Established in 1967, EPSDT is the comprehensive child health Medicaid benefit program that provides for initial and periodic examinations and medically necessary follow-up care for Medicaid eligible children. Its purpose is to "find health problems through early screening services, and to diagnose and treat the problems before they harm children and become too expensive to remediate" (CDF, 1995). EPSDT aims to improve children's health by mandating early and periodic medical, dental, vision, and developmental screening, diagnosis, and treatment for all children and youth whose families qualify for Medicaid eligibility. In FY 1997, the government funded EPSDT at \$467.6 million.

One incentive for the formulation and enactment of the EPSDT program was in response to research that identified the prevalence of a range of preventable problems among children. The Omnibus Budget Reconciliation Act (OBRA) of 1989 amendments to Medicaid's EPSDT provisions required states to reimburse health care providers not only for screening, but also for diagnostic and treatment services resulting from screening to ameliorate physical and mental conditions (Fox et al., 1997). OBRA (1989) also required states to do aggressive outreach and case finding within 60 days of Medicaid eligibility determination and to provide enabling services such as transportation, case management, translation, and appointment scheduling assistance. It also expanded the mandate to provide all treatment services allowed under the federal Medicaid program regardless of whether they were in the state plan and expanded reporting requirements (Rosenbach and Gavin, 1998).

Eligibility

All Medicaid eligible children are also eligible for EPSDT services. States are required to conduct outreach through a combination of oral and written methods designed to inform EPSDT eligible children and their families about the EPSDT program (HCFA, 1999b).

Nature of the Intervention

Medicaid must provide "medically necessary" health care services identified under the EPSDT program for eligible children even if a state's Medicaid plan does not cover those services. As a result of these provisions, "Children have access to benefits that include routine preventive visits, medically necessary diagnostic and evaluative services, and medically necessary treatment services that range

from office-based medical services to various mental health and developmental therapies in non-traditional settings to home health and other long term services" (Fox et al., 1997). Screening services, which are the core of the EPSDT benefit package, must include the following:

- a comprehensive health and developmental history, including a physical and mental health assessment;
- a comprehensive unclothed physical examination;
- appropriate immunizations according to the schedule of the Advisory Committee on Immunization Practices;
- laboratory tests, including blood lead levels;
- health education, including anticipatory guidance;
- dental services, including restoration of teeth and maintenance of dental health;
- hearing services, including hearing aids;
- vision services, including eyeglasses;
- any other necessary health care diagnostic services and treatment covered by Medicaid, whether or not the service is covered under a particular state's Medicaid plan, to correct or improve illnesses and conditions found in screening; and,
- assistance with transportation and scheduling of appointments.

Intended Outcomes/Indicators The federal government set a performance target of appropriate screening for 80 percent of the eligible population. However, average screening rates were 47 percent in 1992 (Sardell and Johnson, 1998). Increasingly, the implementation of EPSDT relies on the language in state Medicaid contracts with managed care organizations. These contracts and the quality standards, incentives, and sanctions they include determine the extent of the implementation of the actual EPSDT benefit.

Analysis

Targeted Risk Factors. EPSDT has enormous potential for addressing all of the medically related risk factors for young children. With its screening, diagnosis, and treatment components, EPSDT is charged with early identification and treatment of problems caused by low birthweight or that are indicative of neurodevelopmental delay or other medical problems. EPSDT specifically requires mental health screenings and the provision of services to address temperament, personality, early behavior, and adjustment problems, or insecure attachment in children. EPSDT services may also address issues arising from child maltreatment and medical problems related to socioeconomic disadvantage.

Discussion. Historically, in spite of its promise, the success of EPSDT has been uneven. Participation rates have fallen far short of the number of eligible children. States resisted OBRA 1989 requirements because a majority of state Medicaid directors and governors believed that the new requirements were an example of an unfunded federal mandate. Now there is concern that Medicaid managed care may exacerbate problems with EPSDT implementation. Language in state managed care contracts requiring EPSDT services is critical to its implementation.

In January 1995, the Children's Defense Fund (CDF) reviewed 33 standard managed care contracts from 23 states and the District of Columbia. They found that 27 contracts made general reference to EPSDT, where the remaining

6 contracts made no reference to EPSDT at all. Several contracts classified EPSDT as an optional activity. Among those contracts that made reference to EPSDT, only 59 percent required plans to furnish periodic screening, and only a small proportion identified all of the screening components. For example, only 12 of 33 contracts explicitly required plans to furnish immunization services to children enrolled in the plan, 8 contracts made it the provider's choice, and 3 contracts specifically directed providers to refer children to the public health department if the providers chose to not provide vaccines.

In a study of Medicaid demonstration waiver programs in four states, Fox et al. (1997) found that the structure of prior authorization at the managed care plan level often prevented children from receiving mental health services especially if those services needed to be delivered by out-of-network providers. In a comparison of 1995 and 1996 contracts, Fox points to a noticeable improvement. Of the 38 states that included EPSDT in capitated contracts in 1996, all contracts communicated the preventive focus of EPSDT and described the screening component. However, 24 percent of these state contracts did not identify statutory requirements for types of screenings, periodicity schedules, responsibility for anticipatory guidance, and follow-up referrals. Eighty-five percent of the states referenced federal regulations indicating that the EPSDT benefit was federally mandated. However, about 60 percent of the states failed to specify EPSDT required diagnostic and treatment services in a manner consistent with federal Medicaid law. Forty percent of states used contract language requiring the provision of the benefits or clarifying that the requirement covers both physical and mental health problems. Thirteen states did not specify that EPSDT requires correcting or ameliorating an identified problem. Six states did not include any of the core elements of EPSDT in the contracts and 2 states did not make reference to the federal law at all in managed care contracts. Only 20 states required plans to follow a medical necessity standard that included preventive, diagnostic, and treatment services for a condition or disability as well as an illness or injury. Oregon had a waiver to eliminate the EPSDT benefit.

In May 1997, the Office of the Inspector General (DHHS, 1997a) issued a report on the extent to which Medicaid managed care providers deliver EPSDT to Medicaid children. Of the 403 Medicaid managed care arrangements in 1995, 48 were primary care management programs, and 355 were some form of managed care organization. The report found that fewer than 28 percent of children in Medicaid managed care received all of the EPSDT screens, and 60 percent did not receive any EPSDT services called for in the states' periodicity schedules. Most visits were sick child visits. This study confirmed earlier studies pointing out the lack of contractual specificity regarding EPSDT in states' managed care contracts. It discussed disincentives for provision of EPSDT. Chief among them was the fact that children may not stay in a particular managed care program for a long period, so the plan has little incentive to provide services for which they will not reap the benefit.

The Inspector General's report (1997a) found that managed care was potentially very conducive to delivering EPSDT services. However, it concluded that only 30 percent of children from birth through age five received all the EPSDT services, 22 percent received some services, and 48 percent received no EPSDT

services. The researchers found no significant differences between health maintenance organization (HMO) and primary care case management (PCCM) plans. However, in states that informed the managed care plans about which children were due for EPSDT services, children received significantly more services. In the recommendations, the study urged that EPSDT be mandated in Medicaid managed care contracts. It urged outreach for well-child visits, follow-up for EPSDT screens, and state reminders of needed EPSDT services to managed care plans. The report supported using the Health Plan Employer Data and Information Set (HEDIS) as a measurement tool to evaluate the nature of EPSDT services performed in managed care settings.

While Pires et al. (1999) found that 93 percent of all managed care programs in the states have incorporated EPSDT to some degree, Stroul et al. (1998) found that states are most likely to mandate screenings at first contact and periodically thereafter. However, the screens often do not include a behavioral health assessment. The Stroul report found that one barrier to detecting behavioral health risk indicators in young children is the lack of necessary training for primary care practitioners.

The EPSDT provisions are also not safe from political attack. An early version of the Senate Finance Committee's draft of the BBA of 1997 would have repealed the EPSDT guarantee. The provision was deleted in the final version, and the enacted BBA included a provision that the DHHS study EPSDT (CDF, 1998).

State Children's Health Insurance Program

History and Mission

The State Children's Health Insurance Program (CHIP) became law [P.L. 105-33] as part of the BBA of 1997. Codified as Title XXI of the Social Security Act, CHIP is a federal grant-in-aid program that entitles participating states to federal allotments that provide child health insurance to targeted low-income children who are ineligible for other insurance coverage, including Medicaid (Rosenbaum et al., 1998). CHIP responds to research that identified uninsured groups of children while documenting the importance of primary care and the need for access to specialized medical services. Outreach and enrollment are a required activity under CHIP. States must provide intake, screening, and Medicaid enrollment of any identified Medicaid eligible children (Rosenbaum et al., 1998).

The BBA of 1997 authorizes \$20.3 billion in federal funds from FY 1998 through FY 2002 and \$19.4 billion over the following five years for CHIP. Annual federal allocations to states are based on the state's share of low-income, uninsured children, based on the Current Population Survey (Kaiser Commission on the Future of Medicaid, 1997).

Under CHIP, states may choose to accomplish expanded child health insurance coverage through expanding Medicaid programs; developing new programs; expanding existing programs that provide health insurance; or using a

combination of approaches. States that choose a Medicaid expansion will receive enhanced federal funds at Medicaid matching rates for the new CHIP enrollees. Moreover, states that choose a Medicaid expansion will in effect create an entitlement to the services that will exist even if funds specifically allocated for CHIP are exhausted. A state that chooses a non-Medicaid plan and exceeds its CHIP allotment cannot receive federal funding beyond the allotted amount (Urban Institute, 1998).

States cannot impose patient cost-sharing for certain preventive services including well-baby and well-child care and immunizations. For other services, for children in families with incomes at or below 150 percent of the federal poverty level, cost sharing must be limited to premiums of \$15 to \$19 per month per family and co-payments of up to \$3 per service as under the Medicaid statute (Kaiser Commission on the Future of Medicaid, 1997). Families with incomes over 150 percent of poverty can be charged more, but total payments may not exceed 5 percent of family income (CDF, 1998).

Eligibility

To receive grants under the CHIP program, a state must maintain the Medicaid eligibility standards that were in effect for children in June 1997. States operating non-Medicaid CHIP programs must screen applicants for possible Medicaid coverage and enroll all eligible children in that program (CDF, 1998). The new CHIP funds must serve children under age 19 who live in families with incomes at or below 200 percent of the federal poverty level or 150 percent of a state's Medicaid income eligibility level (the higher of the two). That is, states that have already broadened Medicaid income eligibility levels above 150 percent of the federal poverty level can expand coverage to children up to 50 percentage points above the current level (Kaiser Commission on the Future of Medicaid, 1997). A state may expand its covered population through the income disregard provision. However, many states do not avail themselves of this provision because of the potential "crowd-out." To receive federal funds, a state must put up a matching amount equal to 70 percent of its matching rate under Medicaid (CDF, 1998).

CHIP is considered a "federal means tested public benefit" under the immigration reform provisions of the PRWORA of 1996. As a result, states electing to create separate CHIP programs rather than expand Medicaid may not use federal funds to assist recently arrived (after August 22, 1996) "qualified alien" children, including most noncitizen legal aliens. Nor can states use their federal funds to assist resident alien children who have resided in the United States before that date (Rosenbaum et al., 1998). States that implement their child health insurance programs through Medicaid may use federal funds to cover legal resident children in the country prior to August 22, 1996 (Kaiser Commission on the Future of Medicaid, 1997). For those children who qualified for CHIP in light of these restrictions, there was an additional concern that participation in CHIP may have negative consequences with respect to the family's immigration status. However, on May 26, 1999, in a letter to state health officials, the Immigration and Naturalization Service (INS) clarified that receipt of Medicaid or CHIP benefits, except in the case of institutionalization for long-term care, cannot be considered by INS and State Department officials when determining whether an immigrant might become a public charge (HCFA, 1999d).

States that choose to operate a separate CHIP program can establish eligibility based on geographic area, age, income and resources, residency, and disability status. States cannot exclude children based on a pre-existing condition or diagnosis and cannot cover higher income children before lower-income children (Kaiser Commission on the Future of Medicaid, 1997). A state must spend 90 percent of its CHIP funds on health insurance for children, while it can use no more than 10 percent of the funds for administrative costs, outreach, direct health services for children, or other purposes (CDF, 1998).

Nature of the Intervention

States that choose to implement the CHIP program by expanding Medicaid must provide the complete Medicaid benefit package including EPSDT. A state that operates a separately administered CHIP program does not have to provide EPSDT or all of the basic Medicaid benefits. However, states must provide coverage that meets several benchmarks or that is equivalent to the benefits coverage in a benchmark package. Specific benchmark packages include: (1) Federal Employees Blue Cross/Blue Shield Preferred Provider Organization (PPO) Plan, (2) coverage available to state employees, or (3) coverage offered by the HMO with the state's largest commercially enrolled population (Kaiser Commission on the Future of Medicaid, 1997). As Rosenbaum et al. (1998) report, "States may set the amount, duration, and scope of limitations under their benchmark equivalent plans and define the standard of medical necessity that determines the extent of coverage, as long as the actuarial equivalency is satisfied." The CHIP legislation requires states to involve the public in the plan's design and implementation. In addition to annual program assessments of the reduction of numbers of uninsured children, CHIP legislation also requires longer-term state performance evaluations (Rosenbaum et al., 1998).

Intended Outcomes/Indicators

Each state with an approved state CHIP program was required to submit an evaluation to the Secretary of Health and Human Services by March 31, 2000. The evaluation addresses a number of issues including the state's effectiveness in increasing the number of children with credible coverage; the characteristics of the children served; the quality, amount, and level of assistance; service area; time limits; coverage and other sources of nonfederal funding; effectiveness of other public and private programs in increasing the availability of affordable quality health coverage; and the states' coordination between other public and private programs for children (BBA, 1997).

Analysis

Targeted Risk Factors. Through its provision of health services to children, CHIP may address risk factors of neurodevelopmental delay; low birthweight; other medical problems; temperament, personality, early behavior and adjustment problems; or insecure attachment in children. CHIP services may also address issues arising from child maltreatment and socioeconomic disadvantage.

Discussion. Outreach and enrollment are primary issues in the implementation of CHIP. States and local levels are developing creative outreach strategies to enroll children. However, the take-up rate is much lower than projected. Both the federal government and foundations are addressing this issue. President Clinton recently ordered a study to determine the problems and recommend solutions. The Robert Wood Johnson Foundation supports two national programs that address access to health care coverage. The Covering Kids program focuses prima-

rily on access to health care benefits, while, through the Access Project, Robert Wood Johnson and the Casey Foundations have teamed up to help communities develop access to insurance benefits and health care services.

Not more than 10 percent of CHIP funds may be spent by a state for administration and outreach. While this provision may have been inserted to protect the direct service money, it may have been shortsighted at least in the early stages of the program. The restriction on available resources hampers state outreach efforts. The historic under-enrollment in the Medicaid program should have led the CHIP planners to invest in outreach early in the implementation phase and then reduce the percentage for administration in subsequent years.

If states choose to set up non-Medicaid CHIP programs, they do not have to provide EPSDT services. The concern about unfunded mandates influenced the debate on including EPSDT in CHIP requirements, and opposition from governors was a prime reason that EPSDT was not required in freestanding CHIP programs. Unlike Medicaid, there is no language specifying that non-Medicaid CHIP plans are responsible for medically necessary services in a child's Individual Education Plan. The CHIP program does not cover adults. Therefore, some pregnant women in CHIP income eligibility brackets or parents of CHIP eligible children may remain uninsured.

Starting Early Starting Smart

History and Mission

The Starting Early Starting Smart (SESS) program is a federal demonstration program that is child centered and family focused. The program is an initiative of SAMHSA with the support of HRSA, the Administration on Children and Families (ACF), the U.S. Department of Education (DOE), the National Institutes of Health (NIH), and the Casey Family Program. Twelve SESS projects began last year and will receive support for four years. The Casey Family Program, the private entity involved in this collaboration, is committed to providing continued funding for successful projects after the public allocation of resources ends.

The mission of the SESS program is to address the needs of young children from birth to age seven who are at high risk for developing substance abuse or mental health related problems that result from adverse situations. The sponsoring agencies estimate that up to 80 percent of children's distress is related to the combination of substance abuse, child abuse, and/or mental illness in the family. SESS is a mechanism to learn more about effective ways to address these factors. The projects will integrate substance abuse and mental health services into service settings that families already use. By providing substance abuse and mental health services via existing service channels, the programs hope to reach those families who are reluctant to go to sites that deliver substance abuse and mental health services exclusively.

Eligibility

SESS supports programs that address the needs of children between birth and age seven who are at risk for developing substance abuse or mental health related problems resulting from adverse situations.

Nature of the Intervention

SESS is a demonstration program that examines the effectiveness of coordination of behavioral health care in two early childhood service settings. Five of the programs are in primary health care settings, and seven programs are in child care settings. Behavioral health care professionals may provide a variety of services, including case management, pediatric primary care, home visitation, dyadic therapy, parent education, support groups, language development, reading readiness, domestic violence treatment and education, in-home support, mental health services, substance abuse intervention and treatment, and specialty services such as speech therapy or physical therapy.

Intended Outcomes/Indicators

The purpose of this collaboration is to test the effectiveness of integrating behavioral health services within primary care and child care settings for children from birth to age seven and their families. Sponsors hope that multi-site funding and integration of services will lead to increased access and availability of prevention activities, mental health services for young children and their families, and parental substance abuse treatment. Outcomes measures include improved child cognitive, social, emotional, and physical development; improved parent/child relationships and family functioning; increased access and availability of prevention activities, substance abuse treatment, and mental health services for young children and their families; and family interaction with community service systems. The intervention also aims at strengthening community supports for families (SAMHSA, 1999).

The collaboration also is funding a data coordinating center that works with SAMHSA and the individual programs in gathering and analyzing information across the other sites, thus providing a means of evaluating the effectiveness of the funded projects.

Analysis

Targeted Risk Factors. The SESS Program seeks to improve children's development cognitively, socially, emotionally, and physically. It seeks to enhance parents' life skills, family functioning, and interaction with community service systems. The program provides support to develop services to address risk factors such as neurodevelopmental delay, cognitive deficits and learning problems, temperament and personality issues, early behavior and adjustment problems, lack of maternal education, parental psychopathology or substance abuse, child maltreatment, insecure attachment, difficulties with peer relationships, preschool experience, relationships with teachers, and low socioeconomic status.

Discussion. SESS is a demonstration program testing an important element of service coordination recommended by a number of child development specialists (Koyanagi and Lorber, 1997). This public-private partnership is a first step in the development of a comprehensive system of care for young children and their families. The sites are receiving consultation from the Georgetown Technical Assistance Center. Researchers and policy makers are looking forward to the demonstration's preliminary and final results.

The program will demonstrate the interdependence of adult and child services systems as it targets the two important risk factors of parental substance abuse and parental psychopathology. Its success relies heavily on providing adequate and effective treatment for these behavioral health problems. It does not, however, provide funds to expand these services.

Community Mental Health Services Block Grant Program

History and Mission

The Community Mental Health Services Block Grant Program (CMHSBG) [Public Law 102-321] is a joint federal-state partnership that supports existing public services and encourages the development of creative and cost-effective systems of community-based care for people with serious mental disorders (Knowledge Exchange Network, 1999). CMHSBG program funds are allocated to meet the needs of adults with a serious mental illness and of seriously emotionally disturbed children; however, it does not regulate how states should spend these funds (Center for Substance Abuse Treatment [CSAT], 1999). In FY 1999, the government funded CMHSBG at \$288 million dollars.

Eligibility

The Center for Mental Health Services emphasizes the targeting of services to populations based on the presence of functional impairment that substantially interferes with or limits the performance of one or more major life activities, in addition to a qualifying diagnosis. As examples of target populations, the Center for Mental Health Services cites children with a serious emotional disturbance and their families; the most seriously disturbed adults with mental illness, individuals with schizophrenia and major mood disorders, and individuals with serious mental illness who are homeless or involved with the criminal justice system (CSAT, 1999).

Children with a serious emotional disturbance are defined as "persons from birth to age eighteen, who currently or at any time during the past year have had a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within the *Diagnostic and Statistical Manual of Mental Disorders, 3rd edition, Revised* that resulted in functional impairment [that] substantially interferes with or limits the child's role or function in family, school, or community activities" (CSAT, 1999).

Nature of the Intervention

States have great latitude to choose how they spend program funds. The CMHSBG Program works in close collaboration with each state or territory to develop and implement its own plan for improving community-based services and to reduce reliance on hospitalization. The program encourages partnerships among a wide range of health, mental health, vocational, housing, education, and dental services. The CMHSBG program funds have the following requirements:

- states must meet minimum allocation requirements for services to children with serious emotional disturbances;
- states are restricted to providing services with funds appropriated under the law only through appropriate qualified community programs, which

may include community mental health centers (CMHCs), child mental health programs, psychosocial rehabilitation programs, mental health peer-supported programs, and mental health primary consumer directed programs; and,

- CMHCs that are part of a state mental health treatment system must meet certain minimum qualification criteria, including certain minimum service requirements within a geographically defined service area, such as outpatient services for target populations, 24-hour-a-day emergency care services, day treatment, and pre-admission patient screening services. Services must be provided to any individual residing or employed in the service area of the center regardless of ability to pay (CSAT, 1999).

The Center for Mental Health Services has developed a set of five criteria if managed care organizations are using the CMHSBG program funds. The managed care contract must:

- be developed as part of a plan for the development and implementation of an organized community-based system of care;
- provide case management as a service benefit;
- be part of a plan that provides for a system of integrated social services, educational services, juvenile services, and substance abuse and mental health services for children with serious emotional disorders;
- be part of an overall plan that includes at least some level of service to persons who are homeless; and,
- be part of a plan that targets defined geographic areas for service (CSAT, 1999).

Intended Outcomes/Indicators The performance measures of the CMHSBG are not clearly defined. However, 5 percent of funding is set aside for the Center for Mental Health Services to provide services that include data collection and evaluation activities to states and territories and their representatives, as well as to mental health planning council members, consumers, and family members (Knowledge Exchange Network, 1999). These include a Mental Health Statistics Improvement Program; a National Reporting Program, the only national source of information on mental health organizations, services, and service recipients and three national technical assistance centers (Knowledge Exchange Network, 1999).

Analysis

Targeted Risk Factors. Services provided through the CMHSBG may directly address parental psychopathology and co-occurring substance abuse. Addressing these issues may indirectly affect problematic parenting practices and child maltreatment as well as insecure attachment, cognitive deficits and learning problems, temperament and personality issues, early behavior and adjustment problems, and difficulties with peer relationships for the children of these parents.

Discussion. The CMHSBG is the largest federal program addressing mental health issues. However, services provided to children through this program are limited to those that address the treatment of serious emotional disturbance. Because of this limitation and the competing demands for these resources, little CMHSBG money is spent on services for children from birth to six years of age. Unlike the Substance Abuse Prevention and Treatment Block Grant, there is no funding set aside for prevention in the CMHSBG. Rather, funds for services for

the prevention or early intervention of emotional or behavioral problems in young children are scattered throughout a number of federal programs across several policy domains. There is no comprehensive, coordinated system of mental health care for young children.

Likewise, CMHSBG funds are restricted to adults with a serious mental illness. Thus, parents of young children must exhibit a very high level of mental distress in order to receive services supported through this federal program.

Discussion of Federal Child Health Policies

Federal health care policies have a direct effect on a child's emotional development. All children and their families need accessible, affordable, quality health care. These federal policies provide the potential for preventing adverse conditions, identifying developmental problems very early on, and treating developmental delay effectively. There are, however, a number of policy challenges in this sector. They include but are not limited to the following:

Access

- ensuring access to health insurance benefit plans as well as to quality medical and behavioral health care services for all children and their parents.

Managed Care

- ensuring that Medicaid managed care contracts contain language that insures full compliance with ESPDT and other federal requirements;
- developing incentives for managed care organizations to address long-term health outcomes;
- monitoring financial incentives;
- ensuring patient's rights; and,
- preventing the unplanned withdrawal of managed care organizations from the Medicaid/ CHIP market.

Screening and Treatment

- ensuring the implementation of EPSDT;
- developing behavioral health care indicators and screening tools appropriate for young children;
- training the health care work force (primary care physicians, pediatricians, and nurse practitioners) in developmental pediatrics and behavioral health care issues; and,
- integrating behavioral health into primary health care settings.

Systems of Care

- creating a continuum of care for the prevention and treatment of early childhood emotional and behavioral problems;
- increasing the funding for the CMHSBG and setting aside a portion of the funds for prevention;

- clarifying operational rules for providing a continuum of care to young children when more than one federal program is involved;
- renegotiating roles for Title V services in light of CHIP and other policy changes;
- funding care coordination at the individual level and professional networking at the community level;
- funding demonstrations testing incentives for provider networks to develop a full continuum of early childhood services; and,
- integrating early childhood mental health professionals and child development specialists into early childhood service delivery systems.

Services for Parents

- addressing the gap in health care coverage for parents of insured children; and,
- providing services to treat parental substance abuse and mental illness more effectively.

Research and Evaluation

- developing knowledge to inform system improvement;
- conducting both short-term and longitudinal studies of the effectiveness (access, utilization, cost, and quality) of early childhood health care delivery system arrangements;
- implementing the National Institute of Mental Health (NIMH) prevention recommendations (NIMH, 1998) by:
 - setting aside a portion of the Community Mental Health Services Block Grant funds for prevention research and services;
 - seeking collaborative funding with other agencies and/or private foundations;
 - supporting trials of well-assessed preventive interventions in various real world settings under diverse organizational and financing frameworks; and,
 - fostering transitional research to discover how best to disseminate, implement, and sustain efficacious preventive interventions in community settings.

Notes

- 1 The actual percentage is set by each state.
- 2 The special income level is set by each state.
- 3 These persons would be eligible for Medicaid under one of the mandatory or optional groups, except that their income and/or resources are above the eligibility level set by their state. Persons may qualify immediately, or may "spend-down" by incurring medical expenses that reduce their income to or below their state's medically needy income level. The medically needy Medicaid program does not have to be as extensive as the categorically needy program, and may be quite restrictive in rules as to who is covered and/or as to what services are offered. Federal matching

funds are available for medically needy programs. However, if a state elects to have any medically needy program, certain groups and certain services must be included according to federal requirements. Children under age 19 and pregnant women who are medically needy must be covered. Prenatal care and delivery care for pregnant women and ambulatory care for children must be provided. A state may elect to provide medically needy eligibility to certain additional groups, and may elect to provide certain additional services within its medically needy program. In 1996, 42 states elected to have a medically needy category, providing at least some services to some recipients. All remaining states use the "special income level" option to extend Medicaid to the "near poor" in medical institutional settings.

- 4 States must use the highest income standard under which a child is potentially eligible.
- 5 Entities include traditional health care providers, WIC programs, Head Start programs, and agencies that determine eligibility for subsidized child care under the Child Care and Development Block Grant.
- 6 The statute defines rehabilitative services broadly, thereby enabling states to offer a variety of beneficial services to children. The regulations state specifically that "rehabilitative services" include any medical or remedial services recommended by a physician or other licensed practitioner of the healing arts, within the scope of his or her practice under state law, for maximum reduction of physical or mental disability and restoration of a recipient to his or her best possible functional level.

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Early Childhood Care and Education

Introduction

The early childhood care and education that young children receive influences their emotional, social, and intellectual development and can significantly affect their school readiness. This section reviews federal programs that provide or support early childhood care and education. These are Head Start; Early Head Start; the Child Care and Development Block Grant (CCDBG); The Elementary and Secondary School Education Act (ESEA), Title 1, Part A, and Title 1, Part B, Even Start; Individuals with Disabilities Education Act (IDEA), Part B, State Grants and Pre-school Grants; and IDEA, Part C, the Infants and Toddlers with Disabilities Program. Table 3 on the next page presents the interaction of these policies with the four major types of risk factors identified for emotional and social development and school readiness (Huffman et al., 2000).

Head Start

History and Mission

Head Start is a federal pre-school program that served over 790,000 children in over 37,000 classrooms operated by 1,400 community-based non-profit organizations and school systems in FY 1998. Approximately 91 percent of the children served by Head Start are three or four years of age. Head Start's goals include developing low-income children's social and learning skills as well as improving their health and nutrition. Strengthening their families' ability to provide nurturing environments through parental involvement and social services is also a high priority. The Economic Opportunity Act of 1964 created Head Start, and the Coats Human Services Amendments of 1998 [P.L. 105-285] has authorized it through the year 2003. Head Start is administered by the Head Start Bureau, Administration on Children, Youth, and Families (ACYF), ACF, in DHHS. Its funding is a discretionary authorization that provides grants directly to local programs. Funding is 80 percent federal, totaling \$4.4 billion in FY 1998 (ACF, 1998c; ACF, 1998g; Committee on Ways and Means, 1998).

Eligibility

Head Start legislation requires that at least 90 percent of the children served come from families whose incomes are at or below the poverty line, and at least 10 percent of the enrollment slots in each local program must be available to children with disabilities. Serving a racially and ethnically diverse population, approximately 36 percent of the children served by Head Start are African-American, 31 percent are white, 26 percent are Hispanic, 4 percent are Native American, and 3 percent are Asian (ACF, 1998c; ACF, 1998g; Committee on Ways and Means, 1998).

Nature of the Intervention

Head Start provides educational, health, nutritional, and social services, primarily in a classroom setting, to help low-income children begin school ready to learn (ACF, 1998b). Most Head Start programs operate on a part day, school year basis, although many local programs either provide or coordinate all day care (ACF, 1998g; Committee on Ways and Means, 1998). Since its inception,

Table 3
Risk Factors and Selected Federal Early Childhood Care and Education Policies Affecting Children's Emotional and Social Development and Readiness for School

Risk Factors	Early Childhood Care and Education Policies							
	Head Start	Early Head Start	CCDBG	ESEA, Title I, Part A	ESEA, Title I, Part B, Even Start	IDEA, Part B, State Grants	IDEA, Part B, Preschool Grants	IDEA, Part C
Individual Child	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	T, D	T, D	P/T, D
Microsystems:								
Family and Peers	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	T, D	T, D	T, D
Day Care and School	P, D	P, D	P, D	P, D	P, D	P, D	P, D	P, D
Exosystem:								
Neighborhood, Community, and Socioeconomic Status	T, D/I	T, D/I	T, D/I	T, I	T, I	NA	NA	NA

This table presents the interaction of each of the policies listed at the top of the columns with the four major categories for risk factors (individual child, family and peers, day care and school, and neighborhood, community, and socioeconomic status) identified as influencing social and emotional development and school readiness. Each column refers to the legislative language of the policy. The codes used to indicate the policy's interaction with the risk factors are as follows:

- P** denotes *prevention* services, while **T** indicates *treatment* services. Both codes appear if a policy has the potential to deliver both prevention and treatment services. Prevention services include those that would be considered either universal or selective in the Institute of Medicine taxonomy.
- D** denotes a *direct* effect on the risk factors, while **I** indicates an *indirect* effect. Both codes appear if a policy may have both direct and indirect effects.
- NA** indicates *not applicable*.

Head Start has included a focus on the social-emotional development and mental health of the children it serves. In the Head Start context, mental health is defined as "... promoting the healthy development of children, supporting family strengths, identifying early signs of emotional and behavioral difficulties, and assisting families with special needs" (Yoshikawa and Knitzer, 1997, p. 2). Although the primary focus of Head Start is on the child, its ecological approach recognizes the importance of parents, and parent involvement is a hallmark of the program. Thirty percent of Head Start staff are parents of current or former Head Start children. A reflection of Head Start's focus on quality classroom experiences is the fact that 90 percent of Head Start teachers have a degree in early childhood education, a Child Development Associate (CDA) credential, or a state pre-school certificate (ACF, 1998g).

Intended Outcomes/Indicators In 1998, Head Start began implementing an outcomes oriented accountability system that includes performance standards and performance measures for tracking the quality and effectiveness of Head Start programs. The standards identify activities that must be performed by Head Start programs, while the measures indicate the quality of results and methods used to achieve them (ACF, 1998h). Head Start programs must:

- develop performance standards for all required services including health, developmental, nutritional, and social services;
- develop performance standards to ensure school readiness including alphabet, phonics, word, and number awareness;
- enhance children's understanding and use of language, including the use of increasingly complex and varied vocabulary to communicate for various purposes;
- build children's appreciation of books;
- demonstrate progress toward acquisition of English for non-English speaking children; and,
- identify performance standards for individualization, parental involvement, and transition activities.

Performance standards also address safety, facilities, personnel, management, governance, and community relations issues (ACF, 1996; Head Start Act, 1998).

Each Head Start classroom must have a teacher with demonstrated professional competence and an early childhood degree, a CDA credential, or a state pre-school certificate. By the year 2003, at least 50 percent of Head Start teachers will be required to have an associate, baccalaureate, or advanced degree in early childhood education or a related degree and pre-school teaching experience. Head Start agencies must show progress toward this goal annually (Head Start Act, 1998).

Social competence is Head Start's ultimate goal, and for a five year old about to enter school, social competence is a critical component of school readiness. Head Start has adopted the multi-faceted view of school readiness recommended by the NEGP that includes the following five developmental domains:

- physical well-being and motor development;
- social and emotional development;
- approaches to learning;
- language use and emerging literacy; and,
- cognition and general knowledge (Kagan, Moore and Bredekamp, 1995).

Most of the Head Start performance data come from the Family and Child Experiences Survey (FACES), a longitudinal study of a nationally representative sample of Head Start programs. Each of the NEGP domains is represented in FACES, which is built on the following five objectives Head Start defines as contributing to social competence:

- enhancing children's growth and development;
- strengthening families as the primary nurturers of children;
- providing children with educational, health, and nutritional services;
- linking children and families to needed community services; and,
- ensuring well managed programs that involve parents in decision making (ACF, 1998h).¹

Head Start's Program Information Report and its Monitoring and Tracking System synthesize a variety of data including the number of children served (by socioeconomic status and ethnicity), class size, and various characteristics of the

services offered. Every two years the Secretary of Health and Human Services must prepare a report for Congress on program characteristics and performance.²

The Head Start Act (1998) mandated an evaluation project to foster continuous improvement in Head Start and to permit ongoing assessment of the quality and effectiveness of Head Start in achieving its goal of increasing social competence. The evaluation project is to examine sources of variation in impacts among Head Start programs including program operation and quality; a child's age at entry and duration in Head Start; the number of hours and days of programming; the type of organization running the Head Start program; geographic location; and participant characteristics (Head Start Act, 1998).

Analysis

Targeted Risk Factors. Head Start directly and explicitly works to improve social-emotional school readiness through a comprehensive set of services for children and their families. Its primary focus is pre-school care and education in a classroom setting. Because of its comprehensive nature, the program addresses a range of risk factors in the categories of the individual child, microsystems (family and peers; day care and education), and the exosystem (neighborhood, community, and socioeconomic status). It both treats and prevents the effects of poverty.

In the individual child category, the program directly focuses on cognitive deficits. However, it also directly addresses the risk factors of low birthweight and neurodevelopmental delay, other medical problems, temperament and personality problems, and early behavior and adjustment problems, as well as inadequate nutrition. In the family and peers category, Head Start's parental involvement and family strengthening components may directly address family based risk factors such as low level of maternal education, problematic parenting practices, and insecure attachment, as well as difficulties with peer relationships. In the day care and school risk category, Head Start directly addresses nonmaternal care and relationships with teachers.

In the neighborhood, community, and socioeconomic status category, Head Start directly addresses the risk factor of low socioeconomic status by providing services to parents that may help overcome this disadvantage. It works with parents to link them to other social programs that may enhance their educational or employment status or provide economic benefits. One of the strengths of Head Start is that it addresses a broad range of risk factors, thus offering one approach to overcoming the lack of specific causal knowledge about the precursors of healthy social-emotional development.

In recognition of a knowledge gap about the prevalence of mental health problems among Head Start populations and among low-income children in general, ACYF and NIMH have established a collaborative mental health research initiative to develop and evaluate the prevention, identification, and/or treatment of mental health disorders within the Head Start context. ACYF also has established a series of Head Start University Partnership research grants that include a focus on mental health issues.

Discussion. Head Start is the only significant federal program directly and explicitly funding pre-school experiences for children without special health or developmental needs. It has never been permanently authorized by Congress and

requires annual appropriations in the budget. Because of funding limitations, Head Start serves less than 50 percent of the children who are eligible. Most Head Start programs operate on a school day and school year schedule, although about half provide some full day services to families who need child care services (ACF, 1998g). Head Start also provides services for only one or two years prior to school entry. More intensive services that start earlier, as Early Head Start has begun to do, might have a greater impact on ameliorating targeted risk factors for individual children. The expansion of the program to serve more children would address the risk factors for a larger portion of the population.

Head Start was designed at a point in time when low-income, AFDC mothers were presumed to be at home and not working. Recently enacted welfare work requirements and other societal changes have resulted and will result in far more mothers of young children working. These changes will increase the pressure on Head Start programs to serve children for the full year and the full working day, either by expanding hours of operation or coordinating with other providers and programs for “wraparound” services. In addition, these changes are likely to have negative impacts on Head Start’s parent involvement component including reductions in the ability of parents to volunteer in order to augment staffing. Head Start’s model of part day, part year services and high levels of parental involvement is being modified, although not quickly enough for the parents of many current or potential participants. Preserving the parent involvement component in the face of increasing work effort by parents will be a challenge.

Current efforts to enhance the quality and consistency of Head Start programs should result in greater positive effects for children in improved programs. Head Start programs have been found to make significant differences in school readiness for children (Fischer, 1995; Zigler, Kagan, & Hall, 1996). Smoothing the transition to school and continuing to provide comprehensive services and supports for children after they leave Head Start for school may enhance benefits for children.

Local community agencies are responsible for implementing Head Start. Therefore, attributes of the implementation have varied substantially from site to site. Although there have been standards for the comprehensiveness of services offered, parent involvement, and teacher credentialing, recent efforts aimed at improving consistency and outcomes have established more detailed performance standards and measures that are currently being implemented and evaluated. The execution of well designed, longitudinal, comprehensive evaluations of Head Start is an important challenge.

Early Head Start

History and Mission

Early Head Start was created when the Head Start program was reauthorized in 1994 and extends the Head Start concept to children from birth to age three. It is a child development program for infants and toddlers in low-income families

and emphasizes strong partnerships with parents. Its family-centered services are designed to enable parents to fulfill their parental roles effectively and move toward economic self-sufficiency. Early Head Start began with 173 awards to 68 communities nationwide in the fall of 1995 and expanded to 600 projects in all 50 states, the District of Columbia, and Puerto Rico by 1999. Services reached 35,000 children and their families in FY 1999 (ACF, 1998g; ACF, 1998b; ACF, 1999; Mann, 1997). Administered by the Head Start Bureau, ACYF, ACF, in DHHS, it received approximately seven percent of Head Start's funding, or about \$338 million in FY 1999 (ACF, 1998b; ACF, 1998g; ACF, 1999; Head Start Act, 1998).

Eligibility

Early Head Start is a national program that serves low-income families with infants and toddlers, as well as low-income pregnant women (ACF, 1998b; ACF, 1998i).

Nature of the Intervention

Early Head Start is a logical extension of Head Start to children under three years old. However, its service delivery model is different and more flexible. It does not focus primarily on a classroom type setting as Head Start does, and service delivery is more likely to be in the home and at family centers. However, the program shares Head Start's philosophy of comprehensive services for children and families that both treat and prevent the effects of poverty.

The goals of Early Head Start are to:

- enhance children's physical, social, emotional, and cognitive development;
- enable parents to be better caregivers and teachers for their children; and,
- support parents in meeting their own goals, including economic independence (ACF, 1998i).

The four cornerstones of Early Head Start are child development, family development, staff development, and community development. The family development component responds directly to research that has established the importance of parent/child attachment to child development and social-emotional school readiness.

With a focus on proactive prevention and building on families' strengths, Early Head Start provides continuous, intensive, and comprehensive child development and family support services. It includes home visits and out-of-home services, comprehensive health services before and after birth, nutrition services, and ongoing support for parents through case management and peer support. It also coordinates with local Head Start programs to ensure continuity as children move from Early Head Start to Head Start at age three. Early Head Start has institutionalized elements of the Comprehensive Child Development Program (CCDP) demonstration project and reflects Head Start's experience with pregnant women, infants, and toddlers in Parent-Child Centers and Migrant Head Start Programs, as well as recommendations made by the Advisory Committee on Head Start Quality in "Creating a 21st Century Head Start" (ACF, 1998i; Mann, 1997).

Intended Outcomes/Indicators

Several components are used to assess the impact of Early Head Start, including performance standards, monitoring, research, and evaluation. In March 1998, the Early Head Start Research and Evaluation Project began an intensive study

of the Early Head Start Program, including a longitudinal study of infants and toddlers in low-income families, that will measure a broad range of outcomes, collect extensive information about the program and families' experiences, and conduct extensive analyses in an attempt to link experiences with outcomes (ACF, 1998j).

Analysis

Targeted Risk Factors. Early Head Start works directly to address a variety of risk factors for social-emotional school readiness in the years from birth to age three. As a result of its comprehensive approach, it affects risk factors in all four risk factor categories.

In general, Early Head Start addresses the same risk factors as Head Start but targets younger children. It evolved, in part, from the recognition in Head Start that some children and families needed to receive services earlier. However, Early Head Start might not address the risk factors of nonmaternal care and lack of positive relationships with teachers, depending on its service delivery model.

Discussion. Early Head Start is the only comprehensive federal program serving children under three years old who do not have a special health or developmental need. It is a new and small program that currently serves fewer than two percent of eligible children. Expanding funding to serve a higher proportion of the eligible population is an important policy challenge. Local community agencies implement the program, and large variations among programs result. Research and evaluation are needed to determine what type, duration, and intensity of services work to produce positive outcomes for children and families.

Child Care and Development Block Grant

History and Mission

The CCDBG program provides grants to states from the Child Care and Development Fund (CCDF) with a combination of mandatory and discretionary funding. It primarily provides funds to subsidize child care for low-income families. CCDBG was restructured by Title VI of PRWORA of August 1996 [P.L. 104-193], which consolidated all the major federal child care programs into the CCDBG. In FY 1997, CCDBG received \$2 billion in mandatory funding and \$1 billion in discretionary funding. CCDBG is administered by ACF in DHHS (ACF, 1998a; Committee on Ways and Means, 1998; Committee on Ways and Means, 1996).

Over the past 20 years, the number of federal child care programs, and programs including child care as an element, has expanded, building on a 60 year history of federal involvement in child care.³ The Congressional Research Service in 1994 identified 46 programs in 10 different agencies that included child care, and the GAO in 1998 reported 22 federal programs in which child care was a key component.⁴

The original CCDBG expired at the end of FY 1995 and continued to operate in FY 1996 under continuing resolutions. Title VI of PRWORA reauthorized

CCDBG for FY 1997 through FY 2002 and modified it by creating the CCDF as the funding vehicle, eliminating entitlements to child care, and combining three programs formerly under Title IV-A of the Social Security Act into an expanded CCDBG. The three programs are:

- child care for families on welfare;
- transitional child care for families leaving welfare; and,
- child care for low-income families at risk of becoming welfare recipients.

The CCDBG is now the primary federal child care subsidy program (Committee on Ways and Means, 1998; Committee on Ways and Means, 1996; National Association of Social Workers [NASW], 1996).

The reauthorization of CCDBG as part of PRWORA had the following five goals: (1) to allow states maximum flexibility, (2) to promote parental choice, (3) to encourage states to provide consumer information to parents, (4) to help states to get and keep parents off public assistance, and (5) to help states implement regulations (Committee on Ways and Means, 1996).

The new block grant consists of two funding streams: \$14 billion over six years in mandatory funding, part of which requires a state match at the Medicaid rate, increasing from \$2 billion in 1997 to \$2.7 billion in the year 2002; and \$6 billion over six years in discretionary funding for which Congress must appropriate specific amounts each year (Committee on Ways and Means, 1998; Committee on Ways and Means, 1996; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).⁵

Funding increased (over the previous spending under the programs combined by PRWORA) by \$4 billion (in aggregate over the six year authorization) and states received additional flexibility. Federal funds follow the parent regardless of which of the three former categories (i.e., on welfare, leaving welfare, or at-risk of going on welfare) she or he may belong to at any given point in time. This was intended to eliminate eligibility gaps and service disruptions. States were given flexibility to transfer up to 30 percent of their Temporary Assistance to Needy Families (TANF) funds to the CCDBG or to use TANF funds for child care without transferring them (Committee on Ways and Means, 1996).

The mandatory CCDBG funding is often referred as "entitlement" funding. These "entitlement" funds do not represent an entitlement of eligible individuals to services as traditional entitlements do. Rather, they are mandatory (i.e., guaranteed) funds provided to the states under CCDBG. The mandatory CCDBG funding is distributed in two components with different allocation formulas. Discretionary CCDBG funds are also distributed based on a revised formula (Committee on Ways and Means, 1998; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).⁶

Four percent of total CCDBG funds must be "set aside" to improve the quality and availability of care, including consumer education and increasing parental choice. This represents a reduction in the quality set aside prior to PRWORA. Formerly, 5 percent of CCDBG funds had to be spent on improving the quality or availability of child care, 19 percent on expansion of before and after school

care and early childhood developmental services, and an additional percent on either of these two improvements. PRWORA legislation deleted this 25 percent set-aside (ACF, 1998a; Committee on Ways and Means, 1996; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

Eligibility

The target population for CCDBG is families with children under the age of 13, at or below 85 percent of each state's median income, where parents are at work or in an education or training program. The original CCDBG targeted children under 5 years of age and families at or under 75 percent of the state median income. States must use 70 percent of the mandatory CCDBG funds for families on TANF who are engaged in work activities, or for families at risk of requiring public assistance. It also subsidizes child care for children in need of protective services. The states establish the details of eligibility and submit a state plan to the federal government (Committee on Ways and Means, 1998).

Nature of the Intervention

Child care providers receiving CCDBG funds must meet all state or local licensing, regulatory, or registration requirements. Except for child care providers who are relatives, states must have minimum health and safety standards for providers receiving federal funds. These standards must include: (1) prevention and control of infectious diseases, (2) building and physical premises safety, and (3) health and safety training for caregivers. Standards for child care providers are somewhat relaxed by the PRWORA changes. Relatives are no longer required to register although they must comply with any applicable state and local requirements. Parental choice must be maximized and can include religious providers. States must also promote informed child care choices (ACF, 1998a; Committee on Ways and Means, 1998; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

PRWORA eliminated the language in the CCDBG that required states to pay market rates for child care. However, states must ensure adequate payment rates to provide eligible children with access to child care comparable to that used by children who are not eligible for subsidies. There is no limit on the reimbursement rate (Committee on Ways and Means, 1998; Committee on Ways and Means, 1996; NASW, 1996).

Intended Outcomes/Indicators

Intended outcomes and indicators are under development at the federal level. Currently, each state develops its own plan and criteria. However, states are required to report data to ACF on both aggregated and disaggregated levels. The aggregated data reported on the CCDF Annual Report (Form 800) include the number of children and providers receiving subsidies for child care by type of setting and caregiver; the payment method; and the estimated number of families receiving child care consumer education. The disaggregated data, reported on the Child Care Quarterly Case Record Form (Form 801), include individual family and optional child identifiers, family income and sources, family co-payment for child care, single parent status, and child's ethnicity and gender (ACF, 1998k; ACF, 1998l).

Analysis

Targeted Risk Factors. The CCDBG's focus is on subsidizing child care, thus addressing the risk factor of low socioeconomic status indirectly by reducing the cost of child care for low-income families, and directly by supporting parental employment that is intended to improve the family's socioeconomic status.

If CCDBG subsidies allow low-income families to use better quality child care than they could have afforded otherwise, CCDBG may directly address other risk factors including cognitive deficits, temperament and personality problems, early behavior and adjustment problems, difficulties with peer relationships, nonmaternal care, and relationships with teachers. Whether these risk factors are actually ameliorated depends upon the quality of child care, the child's needs, and the interaction of these two factors (Cost, Quality, and Child Outcomes Study Team, 1995; Cost, Quality, and Child Outcomes Study Team, 1999).

Discussion. The CCDBG and its funding vehicle, the CCDF, provide resources to states to subsidize child care. States' child care and subsidy systems vary substantially in many dimensions, including quality standards, eligibility requirements, reimbursement rates, and mechanisms for subsidies.

The CCDBG leaves quality standards to the states and only requires states to have minimal health and safety standards. Establishing federal standards or incentives for quality that would enhance the likelihood of positive impacts on children is an important policy challenge. The data reported to the federal government on Forms 800 and 801 are statistical information on who was served and the services provided. Data that would reflect the quality of the services are not collected. The quality set-aside within the grant is small (four percent) and was decreased in 1996. These quality funds can be and are used for a wide variety of purposes other than improving actual service quality, most notably efforts to provide information to parents on availability of care and how to assess the quality of care. Furthermore, CCDBG child care subsidies typically focus on maximizing the quantity of child care slots and the number of working parents that can be supported. This practice tends to encourage inexpensive child care that may not be of the quality needed to support or enhance social and emotional school readiness.

PRWORA's work requirements and time limits have significantly increased the need for child care subsidies for families leaving welfare. Therefore, CCDBG funds typically subsidize child care for these families. Meanwhile, the increase in single parenting and the erosion of real wages for the working poor have expanded the need for child care subsidies among low-income working families. Although the demand for subsidized care for this group is difficult to determine, it is safe to say the current funding levels do not approach the amount needed to subsidize reasonable quality care for all such families. This situation will be exacerbated as PRWORA's time limits encourage and require welfare recipients to enter the job market, thus increasing their demand for subsidized child care. Expanding funding to serve a higher proportion of the eligible population is an important policy challenge.

PRWORA has increased states' flexibility and provided new child care funds. The strong economy has provided healthy revenue to state governments, setting the stage for opportunities to enhance child care subsidies and services in the states. Despite these favorable circumstances, half of the states no longer guarantee child care assistance to welfare families. In 1997, 14 states tightened eligibility for child care assistance, ten states increased child care co-payments for low-

income parents, four states froze or reduced reimbursement rates for providers, and at least two states reduced standards for child care providers (CDF, 1998).

Two additional policy challenges include: supporting quality care through the development of a well-trained, stable, and qualified workforce; and conducting further research and evaluation to establish the characteristics of child care necessary to support healthy development for populations of children with various risk factors.

Elementary and Secondary Education Act, Title I, Part A

History and Mission

ESEA, Title I, Part A was first enacted in 1965 as a “War on Poverty” program and presently provides over \$8 billion per year to fund system-wide supports and additional resources for schools to improve learning for students at risk of educational failure. The program is intended to help address the greater educational challenges facing high poverty communities by targeting extra resources to school districts and schools with the highest concentrations of poverty.

The purpose of ESEA, Title I, Part A is to improve the teaching and learning of low-income children, thereby enabling them to meet challenging academic content and performance standards. The central objective is to support state and local efforts to ensure that all children reach educational standards by providing additional resources for schools and students who have the farthest to go in achieving those goals.

Eligibility

ESEA, Title I, Part A provides supplemental assistance to children who face educational barriers, such as children from low-income families with low literacy, the children of migrant agricultural workers, and children who are neglected or delinquent. Eligibility is based on whether children are failing, or at risk of failing, to meet the state’s student performance standards. They are also selected based on teacher judgment, interviews with parents, and developmentally appropriate measures. However, children who participated in a Head Start or an Even Start program at any time in the two preceding years are automatically eligible for Part A services. Part A funds can be used to serve pre-school children who must meet the same eligibility criteria as older children. The program reaches over 11 million students enrolled in both public and private schools.

Nature of the Intervention

ESEA, Title I, Part A provides flexible funding for supplementary education, professional development, new technology, after school or other extended time programs, and other strategies for raising student achievement.

Intended Outcomes/Indicators

There are no specified outcomes and indicators for pre-school services at the federal level.

Analysis

Targeted Risk Factors. ESEA, Title I, Part A has the potential to directly address the following risk factors: cognitive deficits, difficulties with peer relationships, nonmaternal care, and relationships with teachers. It may also indirectly address low socioeconomic status.

Discussion. Title I, Part A is primarily focused on school aged children. However, it is being used increasingly by states and local educational authorities (LEAs) to address the needs of pre-school aged children who are at risk for educational failure because of less than optimal school readiness. The amount of money and the number of pre-school aged children involved are unknown because spending decisions are made by LEAs, and little information is gathered at either the state or federal level.

LEAs use of Title I, Part A funds for programming for at-risk pre-school aged children overlaps with Head Start and IDEA pre-school programming, particularly where IDEA addresses the needs of at-risk children. Coordination of these programs is important.

Elementary and Secondary Education Act, Title I, Part B: The Even Start Family Literacy Program

History and Mission

Congress first authorized the Even Start Family Literacy Program in 1989 [P.L. 103-382, Sec. 1201]. The Program is intended to help break the cycle of poverty and illiteracy by improving the educational opportunities of the nation's low-income families by integrating early childhood education, adult literacy or adult basic education, and parenting education into a unified family literacy program. The program is implemented through cooperative projects that build on existing community resources to create a new range of services; promote achievement of the National Education Goals; and assist children and adults from low-income families in achieving challenging state content and student performance standards. In FY 1998, federal spending on Even Start was \$124 million, and the program served nearly 40,000 families with 732 projects (DOE, 1999).

Eligibility

The program targets parents and their young children from birth to age eight. There has been an increase in the percentage of infants and toddlers in Even Start from 27 percent in 1989-90 to approximately 32 percent in 1995-97. This may reflect a change in the Even Start regulation that required service to children across at least a three year age span (DOE, 1999).

Low socioeconomic status is a criteria for eligibility in the program, and one of the program's goals is to break the cycle of poverty. In 1996-97, approximately 90 percent of Even Start families had incomes at or below the federal poverty level. A recent change to the legislation allows projects to involve formerly ineligible family members in appropriate family literacy activities.

In addition to the basic model of services, the statute authorizes special set-aside funds (5 percent of the total Even Start allocation) to serve migrant families, Indian tribes and tribal organizations, and outlying areas.

Nature of the Intervention

The basic model of the Even Start program provides the following three core services: (1) adult education and adult literacy (high-quality instructional programs to promote adult literacy, including adult basic education, adult second-

ary education, English as a second language, and preparation for the General Education Development certificate); (2) parenting education (high-quality instructional programs to help parents support the educational growth of their children); and (3) early childhood education (developmentally appropriate educational services for children designed to prepare them for success in regular school) (DOE, 1999).

Even Start projects also offer support services designed to facilitate the provision of core services. Support services may include transportation, child care, nutrition assistance, health care, meals, special care for a disabled family member, and referrals to a wide range of services including mental health and counseling, services for battered women, child protective services, employment, and screening or treatment for chemical dependency. If possible, support services are to be obtained from existing providers to avoid duplication of services.

Intended Outcomes/Indicators Potential outcomes for parents include improved literacy behaviors (e.g., shared literacy events with children and increased reading and writing activities in the home), parenting behavior and skills (e.g., positive parent-child relationships and expectations for the child), and educational and employment skills (e.g., improved reading and English language ability and higher education attainment). Goals for Even Start parents also may include growth in personal skills and community involvement. The potential impacts of Even Start on children include improved school readiness and achievement (e.g., language development and emergent literacy). Once children enter school, outcomes might include satisfactory school performance, improved school attendance, and a lower incidence of special education and retention in grade (DOE, 1999).

Analysis

Targeted Risk Factors. The Even Start Program may directly address several risk factors: cognitive deficits, temperament and personality problems, early behavior and adjustment problems, inadequate nutrition, low level of maternal education, problematic parenting practices, difficulties with peer relationships, nonmaternal care, and relationships with teachers. It may also indirectly address low socioeconomic status.

Discussion. Even Start focuses on enhancing parent and child literacy. Although enhanced child development is the key goal, the program has broader aims including enhancing parenting skills, parents' literacy, parents' economic opportunities, and ultimately family outcomes. Given the average expenditure of approximately \$3,000 per family, local variations in content and quality, the severe need level of most Even Start families, and the fact that most families leave the program within one year, the effectiveness of Even Start is an open question (DOE, 1999).

Even Start addresses risk factors for school readiness that are also addressed by Early Head Start and Head Start, and that could be addressed by IDEA and Title I, Part A funds used for at-risk pre-school or early elementary school-aged children. Coordinating these programs is essential for efficient and effective service delivery.

Individuals with Disabilities Education Act

Introduction

IDEA, administered through the Federal Department of Education, Office of Special Education and Rehabilitative Services (OSERS), is an important federal policy impacting social and emotional development of children with special health care needs.

In FY 1998, programs funded under IDEA included the following three formula grant programs that provided \$4.5 billion to states to improve services for children and youth with disabilities,⁷ including children from birth to six years of age:

- State Grant Program for Children with Disabilities, IDEA, Part B, funded in FY 1998 at \$3.8 billion;
- Pre-school Grants Program, IDEA, Part B, funded in FY 1998 at \$374.0 million; and,
- Infants and Toddlers with Disabilities Program, IDEA, Part C, funded in FY 1998 at \$350 million (Office of Special Education Programs [OSEP], 1999).

This section presents these three programs separately and concludes by discussing them jointly.

The Education for All Handicapped Children Act of 1975 [P.L. 94-142] was the enabling legislation for the special education law that established a national responsibility to provide all disabled children with a "free and appropriate public education." This act required states to offer programs for the full education of all children with disabilities between the ages of 5 and 22 years of age. The law also required states to develop strategies to locate these children, to use intelligence testing that does not discriminate against children racially or culturally, and to offer learning opportunities in the least restrictive educational environment possible, with an emphasis on integrating children with disabilities into regular classrooms (OSEP, 1998c; Pecora et al., 1992).

In 1986, Congress enacted Public Law 99-457, which amended the Education for All Handicapped Children Act, renaming it the Individuals with Disabilities Education Act (IDEA). P.L. 99-457 contained the following three provisions:

- the first section, Part H, (renamed Part C in the 1997 amendments) established a new discretionary program to facilitate the development of a comprehensive system of early intervention for infants and toddlers with developmental delays or disabilities;
- the second section required states to provide free, appropriate public education (FAPE) and related services by the early 1990s to all eligible children with disabilities from the age of three to the age of five, in order to receive IDEA pre-school funds; and,
- the last section of the 1986 amendments reauthorized a number of discretionary programs (Shonkoff and Meisels, 1990).

IDEA was amended in 1994 by the Improving America's Schools Act and most recently in 1997 when Part H became Part C and the role of the Federal Interagency Coordinating Council was expanded to advise and assist the Secretaries of Health and Human Services, Education, Defense, Interior, and Agriculture and the Commissioner of Social Security.

Individuals with Disabilities Education Act, Part B: The State Grant Program

History and Mission

Part B of IDEA, the State Grant Program, covers the delivery of all services to children with disabilities from 3 through 21 years of age. Funds are distributed based on the number of children with disabilities to whom the states provide a free, appropriate public education. LEAs receive reimbursement for any pre-school children they serve; however, they do not have to spend any portion of the State Grant on pre-school children. In FY 1998, the Part B State Grant Program for Children with Disabilities appropriation was \$3.8 billion (OSEP, 1999).

Eligibility

States must serve all children with disabilities between the ages of 3 and 21 years, except for children ages 18 through 21 years if such services are inconsistent with state law, practice, or the order of any court.

Nature of the Intervention

The State Grant Program provides formula grants to assist the 50 states, the District of Columbia, and Puerto Rico in meeting the excess costs of providing special education and related services to children with disabilities. Most of the funds provided to states must be passed on to LEAs. A portion of the funds may be used for state level activities including administration, monitoring, mediation, both direct and support services, development of the State Improvement Program, and assistance to LEAs. Up to 25 percent of the amount received for FY 1997⁸ can be used for state level activities.⁹ The amount states may use for administration is limited¹⁰ (OSEP, 1999).

Intended Outcomes/Indicators

Intended outcomes and indicators are established at the state level.

Individuals with Disabilities Education Act, Part B: Pre-School Grants Program

History and Mission

The Pre-School Grants Program of IDEA, Part B provides funds to states for special education and related services for children with disabilities in the 3 through 5 year old age group. This is in addition to the State Grant Program, which covers children 3 to 21 years of age and serves to ensure the targeting of a minimum level of funding to serve these young children. In FY 1998, the appropriation for the Pre-School Grants Program was \$374.0 million (OSEP, 1999).

Eligibility

In order to be eligible for these grants, states must serve all children with disabilities ages three through five, have an approved state plan under Part B of IDEA, and have an approved grant application. Currently, all states meet these requirements. In addition to children with disabilities, states may, at their discretion, include pre-school aged children who experience developmental delays (as defined by the state and as measured by appropriate diagnostic instruments and procedures) or need special education and related services. States may also allow LEAs to use funds received under this program to provide free, appropri-

ate education to two year olds with disabilities who will turn three during the school year (OSEP, 1999).

Nature of the Intervention

States must distribute the bulk of their grant awards to LEAs and intermediate educational units. Funds may be retained for state level activities up to 25 percent of the amount received for FY 1997, adjusted upward each year on a formula basis. The amount that may be used for administration is limited to 20 percent of the amount available to states for state level activities (OSEP, 1999).

State level activities under the Pre-School Grants Program may include:

- direct services for children eligible under this program;¹¹
- support services, including mediation services that may benefit children with disabilities of all ages, as long as such services benefit children aged three through five with disabilities;
- development of a state improvement plan;
- activities to meet the performance goals established by the state and to support the state improvement plan; and,
- development and implementation of coordinated services that include children with disabilities and their families¹² (OSEP, 1999).

Intended Outcomes/Indicators

According to federal law, services must be individually responsive, reasonably calculated, and provide meaningful benefits at no cost to the parents. Specific outcomes and indicators are established at the state level.

**Individuals with Disabilities
Education Act, Part C:
Infants and Toddlers with
Disabilities Program**

History and Mission

Under the IDEA Amendments of 1997, Part H of the Education for All Handicapped Children Act became Part C of IDEA. Part C provides states with funds to design and coordinate statewide systems of comprehensive, multidisciplinary, interagency early intervention services for all children from birth to age three with disabilities. When Congress originally enacted Part H (now Part C) of IDEA, the crafters of the legislation believed that allocating a large sum of federal money for a new public program was not advisable at the time, and that a significant number of potential funding sources were already available to young children and their families. What was missing, the framers thought, was a single identifiable program to assist families to locate and obtain services for their young children who had, or were at risk for, developmental delays or other conditions (Kates, 1998). Therefore, as Kates (1998) reports, Part C was designed to provide "glue" money to serve as an incentive for states to organize and coordinate a diverse array of potential funding sources. Currently, Part C has developed and implemented interagency funding systems in all the states. Part C, however, lacks permanent federal authorization (Brown and Conroy, 1999). In FY 1998, the government funded IDEA, Part C at \$350 million (OSEP, 1999).

Eligibility

Participation in IDEA, Part C is voluntary on the part of the states. However, once a state has opted to participate, the state must ensure that all children with disabilities and their families have access to needed services. States have the discretion to create state specific definitions of developmental delay, and states may choose to serve children at risk for developmental delay.

To be eligible for a Part C grant, a state must have a statewide system that includes 16 statutory components, including a lead agency with responsibility for coordinating and administering funds, and a state Interagency Coordinating Council to advise and assist the lead agency. States are responsible for ensuring that services are available to all children with disabilities from birth to three years of age. Part C defines infants and toddlers with disabilities as children who:

- experience developmental delays, as measured by appropriate diagnostic instruments and procedures, in cognitive, physical, communication, social, emotional, or adaptive development; or,
- have a diagnosed physical or mental condition that has a high probability of resulting in developmental delay (Brown and Conroy, 1999; Kates, 1998; OSEP, 1999).

Nature of the Intervention

Part C provides for the coordination and some provision of early intervention services for children from birth to three years of age who have disabilities or other special health care needs. These services are designed to meet the developmental needs of children and their families (Brown and Conroy, 1999). The premise of this legislation is that early, specialized help will foster increased independence and decrease the later costs of education for these children. Funds allocated under Part C may be used to:

- provide direct services that are not otherwise provided by public or private sources;
- expand and improve available services;
- implement and maintain a statewide, coordinated, multidisciplinary service system;
- provide free and appropriate public education, in accordance with Part B of IDEA, to children with disabilities from their third birthday to the beginning of the following school year; and,
- initiate, expand, or improve collaborative efforts to identify, evaluate, refer, and serve at-risk infants and toddlers (OSEP, 1999).

The program must provide some services, including outreach, service coordination, procedural safeguards, and an individualized service plan, at no cost to the family.

IDEA specifies the inclusion of emotional development in children's assessments and prescribes mandated tools for that purpose. It requires a multidisciplinary assessment of each family with a disabled infant or toddler and the development, with family participation, of a written, individualized family services plan (IFSP). Consistent with the mediation provision that applies to the State Grant Program, Part C also requires states to offer mediation and transition services for children as they reach the age limit for Part C services.

The policies concerning financing of service delivery under Part C are perhaps the most complex of all those with the potential to address the social and emotional development of young children. Part C establishes the responsibility for participating states to serve disabled infants and toddlers under age three. Health services included in the IFSPs for children who are Medicaid eligible qualify for reimbursement by Medicaid agencies even though the services are in accordance with a child's needs assessment under IDEA. Furthermore, in an effort to prevent cost shifting to IDEA from other programs, states may not reduce medical or other available assistance, alter eligibility under Title V of the Social Security Act related to the MCHBG, or alter eligibility under Title XIX of the Social Security Act related to Medicaid, based on a child's eligibility for services under IDEA (Kates, 1998).

Because IDEA, Part C is set up to provide the infrastructure for an early intervention system that is funded from other federal, state, or local sources, the federal IDEA, Part C allocation must be the last dollar used for direct service provision. Historically, Medicaid has been the federal program with the greatest potential to actually fund services in the IFSP. The EPSDT requirements for screening, diagnostic assessment, and all medically necessary treatment services, even if not included in the state Medicaid plan, would ideally provide many of the services called for in an IFSP. However, EPSDT has never been fully implemented in all the states. In addition, many Medicaid directors have maintained that any service in the IFSP is an education service not reimbursable by Medicaid. Congress amended the Medicaid law to clarify Medicaid's responsibility as first payer for Part C, but, at least in some states, disagreements still continue. The introduction of Medicaid managed care has further complicated this issue. IDEA, Part B funds (both the Pre-school Grants program and State Grants) can be used, in part, for Part C; however, these programs are formula grants, so the use of funds for Part C would take away dollars from Part B programs. Title V MCHBG dollars must also be accessed before using IDEA, Part C funds. Some states are also relying on Early Head Start programs where they exist, WIC funds, SSBG funds, and, in some cases, the use of CCDBG monies under the Part C requirement to provide services in natural environments (Kates, 1998).

Using several federal funding sources is complicated. When only two funding sources are involved, there is usually a known rule for which source is the "last payer." When three or more federal sources are used, the order of precedence can become confusing and complicated. States may also provide some services with state funds (Kates, 1998). In states where the education agency assumes the lead for Part C, it may use family fees at the state's discretion.¹³ If it uses family fees, this may trigger involvement of the family's private insurance coverage. This has also become more complicated under private sector managed care. In many communities, IDEA, Part C coordinators must supplement federal and state funds with fund raising, foundation support, or collaboration with community groups (Kates, 1998).

Part C also funds an Early Childhood Research Institute to evaluate and disseminate strategies and procedures, including encouraging the use of successful

early intervention practices in pre-school programs and the early grades of elementary school. In particular, successful experiences with family-friendly and family-focused approaches to planning and providing special education and related services may be of value in other service arenas (OSEP, 1998a; OSEP, 1998b; OSEP, 1997).

Intended Outcomes/Indicators Each state determines its own outcomes and indicators. Federal law does require the timely provision of services.

**Analysis of IDEA programs
for young children under
Parts C and B**

Targeted Risk Factors. IDEA has enormous potential for directly addressing a number of risk factors including low birthweight and neurodevelopmental delay, other medical problems, cognitive deficits, temperament and personality problems, early behavior and adjustment problems, problematic parenting practices, and insecure attachment. When IDEA services use group, classroom-like settings, IDEA may directly address the risk factors of difficulties with peer relations, nonmaternal care, and lack of positive relationships with teachers.

Discussion. While both Part C and Part B have the potential to address factors that may impede the social and emotional development of children, Part C is significantly different from Part B, State Grants, in several ways. First, state participation in Part C is voluntary. However, once a state opts into this program, the state is responsible for providing access to services for all children with disabilities and their families. Currently, all states participate in Part C, but there have been discussions in some states about dropping the program. The federal government requires providing of Part B services under the State Grants program.

Second, Part C has an explicit family focus. Under Part C, the required service plan is an IFSP, whereas in Part B the state may choose to provide an IFSP or individual education plan (IEP), which may or may not have a family focus.

Third, the underpinnings of Part C come from a child development perspective, whereas Part B stresses education, providing specialized instruction and any services necessary to benefit from specialized instruction (Brown and Conroy, 1999). Children are entitled to a "free, appropriate public education" under Part B, but not under Part C.¹⁴ Part C services may be used for children at-risk of developmental delay; however, at-risk children are not covered under Part B. States may have different definitions for developmental delay in the Part C and Part B programs.

Fourth, states have the option to charge families fees for Part C services, but states must provide Part B services at no cost to parents.

Fifth, other state public agencies may administer Part C, but the state education department must administer Part B.

Sixth, case law has not specified outcomes for Part C. However, case law has established that Part B services must be individually responsive, be reasonably calculated, and provide meaningful benefits at no cost to the parents, although

the operational definition of the "provide meaningful benefits" clause may be a point of contention in some situations.

IDEA, Part C makes a contribution to the coordination of a comprehensive early intervention program; however, the challenge of financing services is central to the development of a community-based system of care for children with disabilities. Although some states are attempting to build integrated service systems for young children, coordinating multiple categorical funding streams often presents a major barrier. This fragmentation continues to challenge effective service delivery and frustrates families, service providers, and state personnel in their efforts to help children with disabilities (Akers and Roberts, 1999).

Because of Part C's reliance on other federally funded health care programs, changes in Medicaid and the implementation of CHIP will have ramifications for the delivery of Part C services. Medicaid managed care and its application to children with disabilities will have an impact on the service delivery system. New programs, such as non-Medicaid CHIP, raise questions about the availability of a full range of medically necessary services for newly insured disabled children.

The interagency nature of the Part C program changes significantly when a child transitions to Part B. This transition is meant to be seamless; however, because of the differences between programs, problems may arise.

Discussion of Federal Early Childhood Care and Education Policies

Federal policies for early childhood care and education (ECCE) have important effects on children's social and emotional school readiness. Federal funds support policies and programs that are focused on special and at-risk populations, specifically children in low-income families and children with disabilities. Funding limitations and lack of quality standards for some of these programs restrict their impact.

Despite the growing recognition of the importance of early childhood development and its impact on social and emotional school readiness, federal ECCE policy is not comprehensive and consistent. For example, children who qualify for and are admitted to an Early Head Start or Head Start program often receive services that focus on the child's emotional development, while children who qualify for and receive child care subsidies under CCDBG get services that vary greatly in quality and may not focus on emotional development at all. This disparity is due in great measure to the fact that Head Start has a mental health component with federal standards and performance measures, while CCDBG has minimal federal health and safety requirements.

Some children who do not qualify for or do not receive Head Start services or child care subsidies may exhibit similar risk profiles to those who do receive federal child care support. However, the impact of federal ECCE policies on the social and emotional school readiness of these children is limited because federal programs address only those children at greatest risk. Progress is being made at the state level. For example, some states are developing pre-kindergarten programs. However, state funds fully support most of these programs.

Federal early childhood care and education requires significant changes in order to support optimally a child's emotional and social development. Some issues include the following:

Infrastructure

- providing incentives to attract qualified and committed staff;
- increasing funds for improving pre-service and in-service staff training, especially in areas of child development, parent-child relationships, and parental substance abuse and psychopathology;
- providing incentives to retain staff, including increasing compensation and fringe benefits for personnel in all child care settings; and,
- leveraging resources to improve the availability and condition of child care facilities.

Systems

- enhancing linkages among early childhood services across policy domains;
- supporting the availability of child development and mental health professionals in ECCE settings;
- encouraging parent involvement and support;
- ensuring that early childhood care and education services are culturally appropriate and foster an appreciation for diversity; and,
- applying the lessons learned from Head Start research to CCDBG funded programs.

Specific challenges are present for early childhood care and education programs that serve young children with special health care needs. Some issues include:

- ensuring that every state continues to implement Part C early intervention services, which are now optional for the states;
- enhancing the eligibility determination process by improving the diagnostic tools needed to identify young children with emotional development problems;
- providing incentives for states to focus on children at risk for emotional development problems in the Part C program;
- supporting improved collaboration among early childhood services across policy domains by examining current federal policies that might hinder collaboration at the local level and taking steps to address the problems;
- addressing the potential for gaps between Part C and Part B services when a child turns three; and,
- maintaining a family-focused child development perspective for children receiving Part B services.

Notes

- 1 FACES has defined measures within each of the five objectives and will collect data from thousands of children and families in 40 Head Start programs across the country. Direct child assessments, parent and teacher reports, and direct observation will be used to gather data on children's growth and development. Parents will be interviewed about their life experiences, as well as their involvement and satisfaction with Head Start. Parents' parenting skills, self-concept, emotional well-being, and progress toward their own educational, literacy, and employment goals will be assessed. Head Start quality will be measured through classroom and teacher-child observation, and will incorporate data on program characteristics and performance (ACF, 1998h).
- 2 Every two years the Secretary of Health and Human Services must prepare a Head Start report for Congress that documents:
 - compliance with performance standards and regulations;
 - federal, state, and local expenditures, and their distribution relative to the distribution of eligible children;
 - the use and source of funds to provide full-day and full-year services;
 - cost per child including analysis of regional variation;
 - description of the types of services provided both on-site and through referrals;
 - description of parent involvement;
 - information on staff including salaries, education, training, experience, and turnover;
 - information on participating children including family income, racial and ethnic background, and disability; and,
 - description of types and conditions of facilities (Head Start Act, 1998).
- 3 The federal government's involvement with child care began with federally funded nursery schools as part of the New Deal of the 1930s. The primary focus was to provide jobs for the unemployed, including teachers. During World War II, federal funding for child care was expanded to meet the needs of mothers who entered the workforce. The Lanham Act financed child care for an estimated 600,000 children before it was terminated at the end of the war. The 1970s and 1980s saw a long and often contentious debate over the role of the federal government in child care, including:
 - what types of subsidies should be available and for whom;
 - whether there should be national standards for child care;
 - conditions under which religious providers could receive federal funds; and,
 - how best to support options for parents in caring for their children or in selecting nonparental child care.
- 4 In particular, two pieces of legislation established four significant federal child care programs. The Family Support Act of 1988 (P.L. 100-485) provided subsidies for child care for: (1) families on welfare and (2) families leaving welfare, while the Omnibus Budget Reconciliation Act (OBRA) of 1990 (P.L. 101-508) provided subsidies for child care for (3) families at risk of receiving welfare and (4) low-income working families in general. These four programs accounted for roughly 80 percent of total child care spending in FY 1997 (Committee on Ways and Means, 1998).

- 5 CCDBG expired in 1995 and was funded under continuing resolutions in FY 1996. It was not reauthorized until PRWORA passed in August 1996. Therefore, some sources cite the funding as \$15 billion of mandatory funding and \$7 billion of discretionary funding over the seven years from 1996 to 2002.
- 6 Under CCDBG as originally authorized in 1988, funds were distributed to the states using a formula based on the state's share of children under five years of age, the number of children receiving free or subsidized lunches, and per capita income. Currently, after PRWORA changes, portions of the funds are distributed based on three separate formulas. The mandatory CCDBG funding is distributed in two components with different allocation formulas. A new formula is used for distributing approximately \$1.2 billion of the mandatory funds each year based on maintaining what each state received previously, provided the state maintains welfare spending at 80 percent or more of its previous level, including spending for welfare-related child care. This portion of the funding does not require a state match. The remaining mandatory funds (approximately \$.8 billion) are distributed based on each state's share of children under 13 years of age provided the state meets maintenance-of-effort and matching (at the Medicaid rate) requirements. The discretionary portion of funds (\$1 billion annually) is allocated among the states using a new formula based on the number of children under 13 years of age in low-income families and per capita income. The states can use a maximum of 5 percent of CCDBG funds for administration (Committee on Ways and Means, 1998; NASW 1996).
- 7 In addition to these three formula grant programs, several other activities are funded under discretionary grant programs that provide funds on a competitive basis to universities, state and local educational agencies, and public and private profit and non-profit organizations to conduct research, training, technical assistance, and evaluation aimed at supporting the implementation of IDEA. These discretionary programs totaled \$252 million in FY 1997.
- 8 This is adjusted each year by the lesser of the rate of increase in the states' allocation or the rate of inflation.
- 9 Funds that are not used for state-level activities must be passed through to LEAs either by formula or as special sub-grants for capacity building and improvement. Within-state formula allocations must be based on the number of children with disabilities that LEAs serve unless federal funding reaches \$4.9 billion. Beyond that level, which has not been reached, different allocation formulas may be used.
- 10 The amount may not exceed the greater of 20 percent of the amount allowed for state level activities or \$500,000, as adjusted for inflation after FY 1998.
- 11 LEAs may use these funds to support public preschools, to pay for children in Head Start, or to pay for children in private or not-for-profit preschools.
- 12 This is restricted to up to 1 percent of the amount received by the state under this section.
- 13 About one quarter to one third of the states are currently collecting fees and other states are considering sliding scales.
- 14 A free, appropriate public education may be provided to some two-year-olds through Part B Section 619 funds.

Family Support and Child Welfare

Introduction. The federal policies discussed in this section address family support and the prevention, treatment, and legal resolution of child abuse and neglect, one of the most serious problems affecting a young child's emotional and social development. These seven federal policies have a direct impact on family life.¹ They are the Family and Medical Leave Act (FMLA); Title IV-B, Child Welfare Services; Title IV-B, Promoting Safe and Stable Families; the Child Abuse Prevention and Treatment Act (CAPTA); Title XX, the Social Services Block Grant (SSBG); Title IV-E, Foster Care and Adoption Assistance; and the Adoption and Safe Families Act (ASFA). Table 4 on the next page presents the interaction of these policies with the four major types of risk factors identified for emotional and social development and school readiness (Huffman et al., 2000).

Family and Medical Leave Act

History and Mission

In 1993, Congress passed the Family and Medical Leave Act (FMLA) to provide a national policy that supports families in their efforts to strike a workable balance between the competing demands of home and work. These demands have intensified as the result of social and economic changes affecting businesses, employees, and families (Commission on Family and Medical Leave, 1996). The U.S. Department of Labor's Employment Standards Administration, Wage and Hour Division, administers and enforces this federal law.

Prior to the FMLA, some employees may have had access to family and medical leave either through voluntary or collectively bargained employer policies or policies required by state leave statutes. The Commission on Family and Medical Leave (1996) reported that a quarter to a third of formal employer policies matched FMLA requirements in the protections they offered. However, many voluntary policies did not provide leave for all the reasons allowed by the FMLA. Prior to the FMLA, the amount of job guaranteed leave that a worker could take varied widely in state law from 16 hours per year to one full year. Eligibility requirements also varied, and many of the laws applied only to state employees. Most of the laws exempted certain small businesses (Commission on Family and Medical Leave, 1996).

Eligibility

The FMLA applies to "all public agencies, including state, local, and federal employers, local education authorities, and private sector firms that employ 50 or more employees for 20 or more work weeks in the current or preceding calendar year for which leave is requested and who are engaged in commerce or in any industry or activity affecting commerce. The FMLA limits benefits to employees² who worked for a covered employer for at least 1,250 hours over the previous 12 months" (Department of Labor, 1998, p. 1).

Approximately two-thirds of the U.S. labor force, including private and public sector employees, work for employers covered by the FMLA. The FMLA covers roughly 11 percent of private sector U.S. work sites, but this relatively small proportion actually employs 60 percent of the nation's private sector employees. The FMLA covers all public sector employers without regard to the number of employees at a given work site.³ It also covers most federal and certain congressional employees (Commission on Family and Medical Leave, 1996).⁴

Table 4

Risk Factors and Selected Federal Family Support and Child Welfare Policies Affecting Children's Emotional and Social Development and Readiness for School

Risk Factors	Family Support and Child Welfare Policies						
	Family and Medical Leave Act	SSA Title IV-B, Child Welfare Services	SSA Title IV-B, Safe and Stable Families	CAPTA	SSA Title XX, Social Services	SSA Title IV-E, Foster Care and Adoption	Adoption and Safe Families Act
Individual Child	P/T, I	P/T, D	P/T, D	P/T, D	P/T, D	T, D	T, D
Microsystems:							
Family and Peers	P/T, D	P/T, D	P/T, D	P/T, D	P/T, D	T, D	T, D
Day Care and School	NA	NA	P, D	NA	P, D	NA	NA
Exosystem:							
Neighborhood, Community, and Socioeconomic Status	NA	NA	NA	NA	T, I	T, I	T, I

This table presents the interaction of each of the policies listed at the top of the columns with the four major categories for risk factors (individual child, family and peers, day care and school, and neighborhood, community, and socioeconomic status) identified as influencing social and emotional development and school readiness. Each column refers to the legislative language of the policy. The codes used to indicate the policy's interaction with the risk factors are as follows:

- P** denotes *prevention* services, while **T** indicates *treatment* services. Both codes appear if a policy has the potential to deliver both prevention and treatment services. Prevention services include those that would be considered either universal or selective in the Institute of Medicine taxonomy.
- D** denotes a *direct* effect on the risk factors, while **I** indicates an *indirect* effect. Both codes appear if a policy may have both direct and indirect effects.
- NA** indicates *not applicable*.

Nature of the Intervention

The FMLA sets a federal minimum job security standard for eligible employees. It entitles eligible employees⁵ to take "up to twelve weeks of unpaid,⁶ job protected leave in a twelve-month period for one of the following reasons:

- the birth and care of an employee's newborn child;
- adoption or foster care placement;
- to care for an immediate family member (spouse, child, or parent) with a serious health condition;
- medical leave when the employee is unable to work because of a serious health condition" (Department of Labor, 1998, p. 2.).

Leave for birth, adoption, or foster care placement must conclude within 12 months of the event. Under some circumstances, employees may take FMLA leave intermittently.⁷ The law requires a covered employer to maintain group health insurance coverage for an employee on FMLA leave in any circumstance where insurance was provided before the leave was taken and on the same terms as if the employee had continued to work. If applicable, arrangements

must be made for employees to pay their share of health insurance premiums while on leave. In some instances, the employer may recover premiums paid to maintain health coverage for an employee who fails to return to work from FMLA leave. Employees are not entitled to accrue seniority, vacation time, or pension rights during the time on leave. However, a leave cannot be considered a break in service for purposes of vesting or eligibility for benefits programs. Upon return from FMLA leave, an employee must be restored to the his or her original job, or to an equivalent job with equivalent pay, benefits, and other terms and conditions of employment (Department of Labor, 1998).

Intended Outcomes/Indicators The intended outcomes/indicators are unspecified.

Analysis

Targeted Risk Factors. By providing for the parent(s) to have time at home with a new baby, adopted child, or child in foster care, the policy may address the risk of insecure attachment. By providing the continuation of an employee's health insurance while on leave, the FMLA may address risk factors of a child with a neurodevelopmental delay, low birthweight, or other medical problems by ensuring access to medical care.

Discussion. The U.S. is the only industrialized country without a comprehensive family and medical leave policy for all workers. The stated goals of FMLA are to balance workplace demands with family needs, promote the stability and economic security of families, and promote national interests in preserving family integrity (Department of Labor, 1995). State laws may expand on the FMLA and provide for a more generous benefit. Employees may take leave for the birth of a child, adoption, foster care, or to care for a dependent with a serious health condition. Under some of these conditions, the FMLA may foster the development of a close parent-child relationship by establishing protections for new parents to spend time with their newborn or newly adopted child. Under other conditions, the FMLA allows for time for an employee to be an active participant in a treatment team for children in foster care. This aspect of the act has increased significance since the passage of the ASFA discussed later in this section.

Family leave may be used to care for an immediate family member with a serious health condition. Under the FMLA, the definition of a serious health condition is an illness, injury, impairment, or physical or mental condition that involves either:

- any period of incapacity or treatment connected with inpatient care (i.e., an overnight stay) in a hospital, hospice, or residential medical care facility, and any period of incapacity or subsequent treatment in connection with such inpatient care; or,
- continuing treatment by a health care provider [that] includes any period of incapacity (i.e., inability to work, attend school, or perform other regular daily activities) (Department of Labor, 1998, p. 2).

This provision of the policy may assist parents of young children with emotional or behavioral problems. These parents have a more difficult time establishing satisfactory child care arrangements. The ability to use the leave intermittently may be helpful in these situations.

FMLA provides a minimal level of government protection to working parents under certain circumstances. However, many parents cannot receive FMLA benefits either because they work for exempt employers or because the economic hardship of unpaid leave does not allow them to avail themselves of the benefits.

Social Security Act, Title IV-B, Subpart 1, Child Welfare Services Program

History and Mission

Infants and toddlers who come to the attention of the child welfare system are at grave risk of emotional harm. Whether because of parental neglect, physical, emotional, or sexual abuse, young children and families involved with the child welfare system present some of the greatest policy challenges.

In 1996 child protective service agencies investigated an estimated two million reports of alleged child maltreatment and determined that almost one million children were victims of substantiated or indicated child abuse or neglect (NCHCANI, 1999). While child abuse affects children of all ages, among children confirmed as victims by child protective services agencies in 1996 more than half were seven years old or younger, and 25 percent were under four years of age. A greater proportion of neglect victims were under eight years of age, while the greater proportion of abuse victims were eight years or older (NCHCANI, 1999). In 1996 approximately 75 percent of an estimated 1,077 children who died as the result of abuse and neglect were age three or under. The majority of perpetrators of child maltreatment were parents (77 percent) or other relatives (11 percent). Other caretakers (foster parents, child care providers, facility staff) were responsible for 2 percent of cases, and in 10 percent of the cases the perpetrators were unknown (NCHCANI, 1999).

Primary responsibility for child welfare services rests with the states. Each state has its own legal and administrative structures and programs. However, the federal government is an integral part of the child protection system, influencing it through legislative language and budget appropriations. The largest federal child welfare program is authorized under Title IV-B, Subparts 1 and 2, of the Social Security Act.

Title IV-B, Subpart 1, the Child Welfare Services Program,⁸ is a capped entitlement program that provides 75 percent federal matching grants to states for child welfare services. The funds were authorized at \$292 million in FY 1998.⁹ The goals of the program include protection of abused and neglected children, family support and preservation, care of the homeless, support for family development, and provision of out-of-home care.

While Title IV-B has been amended a number of times, some of the most important changes resulted from the passage of the Adoption Assistance and Child Welfare Act of 1980 [P.L. 96-272]. This act was passed in response to a series of studies that documented that some foster care placements were unnecessary (i.e., resulting from family financial problems rather than abuse) or that children

were lost in the foster care system (Kamerman, 1999). The act attempted to restructure the federal government's role in protecting children by:

- emphasizing the need to keep children out of foster care, if possible;
- shortening the stays of those in care;
- linking basic protections for children and parents to state funding;
- providing help in finding adoptive homes for children; and,
- monitoring state progress in protecting children (CDF, 1998).

P.L. 96-272 limited states in the amount of Title IV-B funds they could use for child care, foster care, and adoption in order to create incentives to ensure reasonable efforts to avoid a child's removal from home. In addition, the act required:

- case plans and case reviews every six months;
- foster care placements close to home;
- the identification of a permanent alternative if family reunification was not possible; and,
- a court disposition of the case within 18 months (Kamerman, 1999).

States were also required to:

- conduct an inventory of all children in foster care for at least six months;
- establish an information system for all children in foster care;
- provide due process protections for families; and,
- conduct in-home and permanent placement service programs, including preventive and reunification services.

P.L. 96-272 authorized funds for direct federal grants to public and private entities for child welfare staff training and for demonstration activities. Although efforts to weaken and repeal the Act in the early 1980s hindered its implementation, it stimulated the development of prevention and reunification services in some states and dramatically increased chances of adoption for children with special health care needs (CDF, 1998). The most significant changes since 1980 in child welfare are the result of the Adoption and Safe Families Act (ASFA), enacted in November 1997 and discussed later in this chapter.

Eligibility

There are no federal income eligibility requirements for individuals receiving child welfare services. Some states may provide child welfare services to families on a voluntary basis. In many cases, however, states require a substantiated report of child abuse or neglect in order to provide services.

Nature of the Intervention

Title IV-B, Subpart 1 provides funds to the states for child welfare services including screening, investigation, and treatment of problems of child abuse or neglect, or the exploitation or delinquency of children. The funds may provide services that (1) prevent out-of-home placements such as family support or preservation; (2) ensure adequate foster care; (3) restore children to their families when possible; and (4) place children in adoptive families. Prior to ASFA, keeping families together was the highest priority. While maintaining this as a goal, ASFA amends Title IV-B by emphasizing child safety and providing exceptions to the "reasonable efforts" required by law.

Intended Outcomes/Indicators Because of minimal federal reporting requirements for Title IV-B, Subpart 1, there are no national or state-by-state data on the exact number of children served, their characteristics, or the services provided (Committee on Ways and Means, 1998). However, Section 203 of ASFA required the Secretary of Health and Human Services, in consultation with state child welfare leaders, to develop a set of outcomes measures and to report to Congress yearly on the performance of each state on each of the goals. The newly articulated outcomes goals are to:

- reduce recurrence of child abuse and/or neglect;
- reduce the incidence of child abuse and/or neglect in foster care;
- increase permanency for children in foster care;
- reduce time in foster care to reunification without increasing re-entry;
- reduce time in foster care to adoption;
- increase placement stability; and,
- reduce placements of young children in group homes or institutions (Federal Register, 8/20/99).

Analysis

Targeted Risk Factors. Title IV-B services address children who have been abused, neglected, or exploited. The program focuses on maintaining children within their own families if possible or assuring adequate out-of-home care when necessary. These services, provided under Title IV-B, Subpart 1, address insecure attachment, problematic parenting practices, and child maltreatment. Services may also respond to the needs of children with neurodevelopmental delay, low birthweight or other medical problems, and temperament, personality, and early behavior or adjustment problems arising from problems in the home.

Discussion. Title IV-B, Subpart 1 is the backbone of federal child protection policy in the United States. Language in Title IV-B articulates the philosophical underpinnings of the national child protective services system. As amended by P.L. 96-272 in 1980, the underlying goal of Title IV-B was preserving an intact family and, in the case of child removal, the reunification of the child with the biological family. The law required states to show that they had made "reasonable efforts" to keep the family together or reunite family members. At times the standards were rigidly adhered to possibly contributing to some widely publicized deaths of children known to the child protective services system.

Responding to these problems, the ASFA of 1997 amended Title IV-B and made exceptions to the "reasonable efforts" language under certain circumstances. While Title IV-B funds may be used by states for a range of child abuse prevention and treatment services, because of overwhelming demand on the child protective service system, many states restrict the use of Title IV-B funds to support the screening, investigation, and treatment of child abuse and neglect cases.

Social Security Act, Title IV-B, Subpart 2, Promoting Safe and Stable Families

History and Mission

Under Title IV-B, Subpart 1, states already had the option to expend their federal child welfare services money for family support or family preservation services. However, few states used a significant share of the funds for these purposes (Committee on Ways and Means, 1998). Thus, a second section of Title IV-B, Subpart 2, originally known as the Family Preservation and Family Support Act (FPFSA), was passed in 1993 in response to the eroding preventive focus of existing federal programs such as Title IV-B, Subpart 1 and Title XX, the Social Services Block Grant. Originally the FPFSA focused solely on state grants for family support and family preservation programs. This act reflected a commitment to strengthening families, preventing abuse, and protecting children by stressing the importance of keeping the family together. It reinforced the federal requirement that states make "reasonable efforts" to avoid out-of-home placement. Funding for the FPFSA was \$240 million in FY 1997 and \$255 million in FY 1998.

The FPFSA was reauthorized and renamed the Promoting Safe and Stable Families Act by the ASFA of 1997. The reauthorization added two service categories: family reunification services and adoption promotion and support. However, the ASFA added only \$20 million to the new Promoting Safe and Stable Families Act in the first year, increasing funding from \$255 million in FY 1998 to \$275 million in FY 1999, \$295 million in FY 2000, and \$305 million in FY 2001 (Committee on Ways and Means, 1998). After set-asides for research, training, technical assistance to improve foster care and adoption proceedings, evaluation of family preservation and support activities, a grant program for state courts, and an allotment for Indian tribes, the federal government allocates the remaining entitlement funds among the states.¹⁰ As required by ASFA, states must develop comprehensive five-year plans in order to receive funds. These plans must include data collection, analysis, and collaboration with numerous organizations with expertise in children and family services.

Eligibility

There are no federal income eligibility requirements for individuals receiving these services.

Nature of the Intervention

These grants help state child welfare agencies operate preventive, community-based, family support services for families at risk or in crisis, family preservation and unification services, and adoption promotion and support. As originally intended under FPFSA, services may be used to prevent abuse or neglect, prevent foster care placement, or to help reunite children with their biological families (Committee on Ways and Means, 1998). Family support services connect families to available community resources and supportive networks that assist parents with child rearing. The programs attempt to alleviate parental stress and prevent a crisis from occurring. These services may include: information and referral; early developmental screening for children; child care/drop-in programs; home visiting; respite care for parents and caregivers; and parent education. Newly added family reunification services may also be used to support the return of a child to his/her biological family, if appropriate, to provide follow-up services to families after a child returns from out-of-home care, and to support adoption.

Intended Outcomes/Indicators. The Secretary of Health and Human Services requires evaluation of family preservation and family support programs and the GAO has released two reports on the implementation of these programs. In 1995, the GAO (1995d) reported that states were on track in the implementation phase. However, the report identified the following two areas in which states anticipated difficulty:

- developing appropriate baseline information to guide the process; and,
- conducting comprehensive evaluations to measure success (Committee on Ways and Means, 1998).

As a result, the GAO recommended that DHHS provide additional assistance to the states in these areas and, in response, DHHS has made additional resources available. In 1997, the GAO (1997b) reported that states were using the new funds to increase the availability of services by establishing new programs and expanding existing ones (Committee on Ways and Means, 1998). Currently, there are no specified outcomes for the additional family reunification and adoption promotion and support services.

Analysis

Targeted Risk Factors. Services supported through Title IV-B, Subpart 2 stress the prevention and treatment of problematic parenting practices, child maltreatment, and attachment problems. They may address low birthweight and neurodevelopmental delay; temperament and personality problems; early behavior and adjustment problems; and nonmaternal care.

Discussion. States determine the use of these funds. However, often when states combine prevention and treatment dollars, as in this case, they funnel resources to address crises and do not address prevention issues. Added pressure from the ASFA to speed up the termination of parental rights and the adoption process coupled with little increase in the total budget may force states to direct this money to treatment and adoption, thereby weakening the primary prevention aspect of the original program.

Child Abuse Prevention and Treatment Act

History and Mission

CAPTA, originally enacted in P.L. 93-247 in 1974, included the first federal standards for the mandated reporting of child abuse and neglect. The law was completely rewritten in the Child Abuse Prevention, Adoption, and Family Services Act of 1988 [P.L. 100-294].¹¹ The CAPTA Amendments of 1996 [P.L. 104-235] consist of two titles: Title I provides for general child protective service programs, and Title II provides community-based family resource and support grants to states.

CAPTA's Title I goals focus on child protection and include:

- reducing the number of children who are abused or neglected;
- ensuring that children and their families receive adequate protection and treatment; and,
- supporting a comprehensive approach to the problem of abuse and neglect.

Title I stresses the integration of social service, legal, health, mental health, education, and substance abuse agencies and emphasizes that the child protection system should be comprehensive, child centered, family-focused, and community-based. CAPTA urges the promotion of physical and psychological recovery and social reintegration of child abuse and neglect victims in an environment that fosters health, safety, self-respect, and dignity of the child (CAPTA, 1996). The federal government authorized Title I at \$100 million in FY 1997.

Title II of CAPTA, authorized at \$66 million in FY 1997, funds community-based family resource and support grants with the goals of:

- supporting state efforts to develop, operate, expand, and enhance a network of community-based, prevention focused family resource and support programs that coordinate resources among organizations dealing with existing efforts in education, vocational rehabilitation, disability, respite care, health, mental health, job readiness, self-sufficiency, child and family development, community action, Head Start, child care, child abuse and neglect prevention, juvenile justice, domestic violence prevention and intervention, housing, and other human services within the state; and,
- fostering an understanding, appreciation, and knowledge of diverse populations in order to be effective in preventing and treating child abuse and neglect (CAPTA, 1996).

Eligibility

To be eligible to receive a grant under Section 106 of Title I, Child Abuse and Neglect Treatment programs, a state must prepare and submit to the Secretary of Health and Human Services a state plan¹² that specifies the areas of the child protective services system that the state intends to address with amounts received under the grant. The CAPTA state plan¹³ must be coordinated with the Title IV-B state plan (CAPTA, 1996).

In order for a state to qualify for assistance under Grants to States for Programs Relating to the Investigation and Prosecution of Child Abuse and Neglect (Title I Section 107 of CAPTA), a state must establish and maintain a state multidisciplinary task force on children's justice composed of representatives from law enforcement, judiciary, attorneys, child advocates, health and mental health professionals, child protective service agencies, child disability specialists, and representatives of parents' groups.

To receive funding, the state task force must review and evaluate state investigative, administrative, civil and criminal judicial handling of cases of child abuse and neglect, making policy and training recommendations in each category. The state must also adopt recommendations of the state task force in a number of categories.

To be eligible for Title II, Community-Based Family Resource and Support Grants, each state must designate a lead entity to administer funds.¹⁴ Title II grants are allotted on a formula basis (CAPTA, 1996).¹⁵

Nature of the Intervention

At the federal level, Title I of CAPTA authorizes the Office on Child Abuse and Neglect to execute and coordinate the functions authorized by the act. It authorizes the Secretary to appoint a National Advisory Board on Child Abuse and Ne-

glect, supports a National Clearinghouse on Child Abuse Information and provides support for a program of research and evaluation (CAPTA, 1996).

CAPTA, Title I, Section 106 (1996) authorizes grants to states for child abuse and neglect treatment programs. Under this section, the act makes grants to the states, based on the population of children under the age of 18 in each state that applies for a grant under this section. Funds may be used to:

- improve the child protective services system of each state in areas such as intake, assessment, screening, and investigation of reports of abuse and neglect;
- develop multidisciplinary interagency protocols to enhance investigations;
- improve legal preparation and representation;
- provide case management and delivery of services;
- enhance the general child protective service system by improving risk and safety assessment tools and protocols;
- facilitate training opportunities; and,
- develop, strengthen, and support child abuse and neglect prevention, treatment, and research programs in the public and private sectors.

States may also use the funds for information and education programs, direct services, or the coordination of training programs designed to improve the provision of services to disabled infants with life threatening conditions and their families. Services necessary to facilitate adoptive placement of disabled infants may also be supported by the funds from this section.

Title I Section 107 of CAPTA (1996) provides grants to states for programs relating to the investigation and prosecution of child abuse and neglect cases. These grants to the states are for the purpose of assisting states in developing, establishing, and operating programs designed to improve:

- handling of child abuse and neglect cases (particularly cases of child sexual abuse and exploitation) in a manner that limits additional trauma to the child victim;
- handling of cases of suspected child abuse or neglect related fatalities; and,
- investigation and prosecution of cases of child abuse and neglect, particularly sexual abuse and exploitation.

Title I Section 109 ensures effective coordination among programs related to child abuse and neglect under this act and other such programs assisted by federal funds.

CAPTA (1996) Title II services may be funded to develop, operate, expand, and enhance statewide networks of community-based, prevention-focused, family resource and support programs that may:

- provide early, comprehensive support for parents;
- promote the development of parenting skills, especially in young parents and parents with very young children;
- increase family stability;
- improve family access to other formal and informal resources and opportunities for assistance within communities;

- support additional needs of families of children with disabilities through respite care and other services;
- decrease the risk of homelessness;
- foster development of a continuum of preventive services for children and families through state and community-based public and private collaborations and partnerships;
- finance start-up, maintenance, expansion, or redesign of specific family resource and support services such as respite care, child abuse and neglect prevention activities, disability services, mental health services, housing services, transportation, adult education, home visiting, and other similar services;
- maximize funding for financing, planning, community mobilization, collaboration, assessment, information and referral, start-up, training and technical assistance, information management, reporting, and evaluation costs for establishing, operating, or expanding a statewide network of community-based, prevention-focused, family resource and support programs; and,
- finance public information activities that focus on the healthy and positive development of parents and children and the promotion of child abuse and neglect prevention activities.

Grants made under Title II must be used to develop, implement, operate, expand, and enhance community-based, prevention-focused, family resource and support programs that:

- assess community assets and needs through a planning process that involves parents and local public agencies, local nonprofit organizations, and private sector representatives;
- develop a strategy to provide a continuum of preventive, family-centered services to children and families, especially to young parents and parents with young children, through public-private partnerships;
- provide parent education, mutual support and self-help, and leadership services; outreach; community and social service referrals; follow-up services; respite care; adoption counseling; child care; early childhood development and intervention; community referral services; and self-sufficiency and life management skills training;
- develop leadership roles for the meaningful involvement of parents;
- provide leadership in mobilizing local public and private resources to support family resource and support program services; and,
- participate with other community-based, prevention-focused, family resource and support program grantees in the development, operation, and expansion of the statewide network. (CAPTA 1996)

In awarding local grants under Title II, the act requires that the lead entity give priority to effective community-based programs serving low-income communities and those serving young parents or parents with young children, including community-based family resource and support programs (CAPTA, 1996).

Intended Outcomes/Indicators

Title I of CAPTA requires each state to submit a state plan as discussed under eligibility. States receiving a grant under Title II must demonstrate the effective development, operation, and expansion of a statewide network of family resource and support programs by:

- supplying an inventory and description of the services provided to families by local programs that meet identified community needs;
- demonstrating the establishment of new respite care and other specific new family resource services, and the expansion of existing services;
- describing the number of families served and the involvement of a diverse representation of families in the design, operation, and evaluation of services;
- demonstrating a high level of satisfaction among families who have used the services;
- demonstrating the establishment or maintenance of innovative funding mechanisms;
- describing the results of a peer review process conducted under the state program; and,
- demonstrating an implementation plan to ensure the continued leadership of parents (CAPTA, 1996).

Analysis

Targeted Risk Factors. Under CAPTA, services may be provided that prevent or treat insecure attachment problems, child temperament and personality problems, early behavior and adjustment problems, problematic parenting practices, child maltreatment, and parental substance abuse or psychopathology. Programs funded through CAPTA may also address children with neurodevelopmental delay, low birthweight, or other medical problems.

Discussion. CAPTA provides resources to states to prevent child abuse and neglect and to enhance the child protective services system. Although the smallest of the federal child abuse and neglect programs in appropriation, CAPTA is by far the most specific and directive legislation. Title I requires state plans detailing state compliance. The Act stresses the importance of multidisciplinary coordination across the child serving agencies, law enforcement, and the court system. Unfortunately, the legislation lacks effective enforcement mechanisms; therefore, service coordination varies significantly across the states.

Title II contains the most protected federal child abuse and neglect prevention dollars. This section dedicates federal funds to provide incentives to states to develop and maintain family resource and support programs. Title II of the CAPTA legislation could be one of the most important building blocks in the establishment of a comprehensive system of early childhood care. The legislation specifically mentions that services should focus especially on young parents and parents with young children. The matching formula and lead state agency requirements encourage both state and private sector participation in the family support activities it funds. However, Title II's creative funding mechanism is underfunded and underutilized. The federal government should increase funding for Title II and use this mechanism to support community-based prevention programs. They should also make efforts to ensure the use of some funds for rigorous program evaluation and continuous quality improvement.

Social Security Act, Title XX, Social Services Block Grant

History and Mission

Title XX of the Social Security Act was signed into law on January 4, 1975. These funds are administered by the ACF, DHHS, and are given to states to help them meet a variety of needs of families and children and to achieve a wide range of social policy goals. Title XX grew out of the belief that providing cash benefits alone would not meet the needs of the poor.

Prior to 1975, the federal government had matched state social service expenditures for welfare recipients at 50 percent starting in 1956 (Committee on Ways and Means, 1998). Funding for child and family social services linked to welfare expanded dramatically in the 1960s. In 1962, Congress passed an amendment providing reimbursement for states at 75 percent of what they had spent for social services for poor families (Kamerman, 1999; Committee on Ways and Means, 1998). "Between the late 1960s and early 1970s, as a result of a loophole in a 1967 amendment, states saw an opportunity to shift some social services over to the federal government, and there was an explosion in social services spending linked to welfare receipt or potential eligibility. When the Congress realized what was happening, it set a cap on these expenditures and subsequently enacted the first general social services legislation, Title XX, of the Social Security Act in 1974" (Kamerman, 1999, p. 4). When it was created, Title XX had a permanent authorization for federal funding of \$2.8 billion annually.

The OBRA of 1981 turned the matching grant to the states into the Social Services Block Grant (SSBG), in effect giving states greater flexibility in service delivery and eliminating requirements for planning, consumer input, monitoring, and data collection (Kamerman, 1999). The federal government reduced the SSBG entitlement ceiling to \$2.4 billion for FY 1982. Although the entitlement ceiling had risen to \$2.8 billion by 1996, the PRWORA of 1996 [P.L. 104-193] reduced the SSBG by 15 percent and set the annual entitlement ceiling at \$2.38 billion for FY 1997–2002. Despite the \$2.38 billion established ceiling, Congress appropriated \$2.5 billion in FY 1997 (CDF, 1998). In FY 2000, Congress appropriated \$1.78 billion, the lowest funding level since the program's inception (Federal Register, 12/28/99).

Eligibility

SSBG funding is based on a statutory population formula. It does not require any state matching funds, and it may be used as the states see fit to provide services to low-income children, adults, families, and the elderly.

Nature of the Intervention

The SSBG provides funds to states to deliver whichever services they choose free to the poor and at sliding scale fees to the near poor. The SSBG has become a major parallel source of social service funding for children's services (Kamerman, 1999). The states receive SSBG funds to help them achieve a wide range of social policy goals, including:

- reducing welfare dependency;
- preventing child abuse and neglect;
- supporting family reunification;
- preventing inappropriate institutional care; and,
- securing institutional care when other forms of care are inappropriate.

States may use the money to provide services for consumers of all ages. Some essential services they may provide to young children and families with block grant funds include:

- child day care;
- child protection;
- home-based services;
- homemaker services;
- employment preparation;
- substitute care and placement;
- adoption;
- transportation;
- mental health services;
- counseling;
- services for the disabled;
- health related services;
- emergency care; and,
- housing improvement.

Little is known about states' use of these funds since states do not have to provide detailed reports. According to recent state expenditure reports, SSBG funds most frequently provide child care, child protection, and home-based services.¹⁶ As the child welfare system has become overwhelmed in recent years, states have increasingly used the SSBG to provide services to abused and neglected children. PRWORA also allows states to use SSBG funds to provide non-cash vouchers for children whose parents exceed the five-year limit on welfare benefits or who are ineligible for assistance due to a state imposed family cap (Committee on Ways and Means, 1996; National Association of Homes and Services for Children [NAHSC], 1997).

Intended Outcomes/Indicators The states determine intended outcomes and indicators.

Analysis

Targeted Risk Factors. SSBG services may be used to address a range of risks, including assisting low-income children with cognitive deficits and learning problems and children with temperament, personality, early behavior and adjustment problems, or difficulties with peer relationships. SSBG services may also be used to provide services to low-income parents with substance abuse or mental health problems, or in cases where there are problematic parenting practices, child maltreatment, or insecure attachment. To the degree that states use these funds for child care, the SSBG may impact a child's relationship with teachers or nonmaternal caretakers or difficulties with peer relationships. Services may also address the risk factor of low socioeconomic status.

Discussion. SSBG has the potential to be used for prevention services. However, many states supplement their Title IV-B programs with SSBG dollars used for treatment services in child abuse and neglect cases. The cut in the SSBG may result in greater competition for child welfare resources since SSBG funds may be used to meet the needs of disabled adults and the elderly, as well as children. However, PRWORA does allow states to transfer some of the TANF block grant dollars to the SSBG.

Social Security Act, Title IV-E, Foster Care and Adoption Assistance

History and Mission

Foster Care and Adoption Assistance, Title IV-E of the Social Security Act, was enacted in 1980 and is administered by ACF, DHHS. Programs for young children under Title IV-E fund the states to provide foster care for income eligible children and to support the adoption of children who require special assistance. The foster care and adoption assistance payments to states are an open-ended entitlement that reimburse states for a portion of the costs of placing children in foster care and adoptive homes using the federal match at the Medicaid rate.¹⁷ In FY 1998, funding was \$3.2 billion for foster care and \$701 million for adoption assistance (Committee on Ways and Means, 1998).

Eligibility

The foster care funds are intended to assist states with the maintenance costs of low-income children in out-of-home care. The adoption assistance program helps states support the adoption of low-income or SSI eligible children or children with special concerns such as minority status, older age, membership in a sibling group, or a mental or physical handicap. The same state agency must administer both Title IV-B and Title IV-E.

Nature of the Intervention

Foster care programs vary from state to state. Each state, based on the history of its foster care program costs, receives an allotment with a ceiling as an incentive to control foster care maintenance costs by controlling the length of time that children are in foster care. If the state stays under the ceiling, these foster care (Title IV-E) funds can be transferred to Title IV-B, which allows more flexible use of the funds for child welfare, family preservation, and family support programs. This incentive to control foster care maintenance payments represents an important reform. The previous structure of federal funding acted as an incentive to keep children in foster care, since federal regulations limited the amounts that could be spent on preventive or restorative services (Committee on Ways and Means, 1998).

Funds under Title IV-E are also available to subsidize adoptions of income-eligible children who are classified as having special needs. The special need classification applies to a child who the state has determined falls into a specific condition or situation, including older age, membership in a minority or sibling group, or disabilities that prevent placement without special assistance. Programs vary from state to state (Pecora et al., 1992; Committee on Ways and Means, 1996).

Intended Outcomes/Indicators

In order to receive Title IV-E funds, states must institute certain procedures, including a state inventory of children in care, standards of care, and procedural safeguards regarding removal and placement agreements (Committee on Ways and Means, 1998).

Analysis

Targeted Risk Factors. Title IV-E funds foster care and adoption for children who may have risk factors such as low birthweight, neurodevelopmental delay, other medical problems, or temperament, personality, or behavior adjustment problems. Services provided through this program remove children when necessary from situations of problematic parenting practices that result in child maltreatment. The program limits services to families with socioeconomic disadvantage.

Discussion. Title IV-E has by far the largest appropriation for child welfare services. The federal government appropriated over \$3.2 billion for foster care alone in FY 1998. At the end of 1996 over 530,000 children were in out-of-home care, an increase of 53 percent in a 10 year period. From 1995 to 1996, however, the number of licensed family foster homes decreased from 140,000 to fewer than 120,000 (CWLA, 1999). The numerous challenges in the foster care system include low foster care reimbursement rates, an insufficient number of homes, multiple foster care placements per child, and workforce issues. While these problems impact all children, these systemic problems have serious ramifications for the youngest children.

Adoption assistance at \$701 million was the second largest single child welfare appropriation in FY 1998. Federal adoption policy was significantly affected by the ASFA discussed below.

Adoption and Safe Families Act

History and Mission

The ASFA [P.L. 105-89] was enacted in November 1997. It reauthorized and renamed Title IV, Subpart 2, the Family Preservation and Family Support Act of 1993, and also amended substantive sections of Title IV-B and Title IV-E. ASFA was enacted to improve the safety of children, to promote adoption and other permanent homes for children, and to support families (ASFA, 1997).

The ASFA requires that a child's health and safety be of paramount concern, allowing for exceptions to the "reasonable efforts" requirements in Title IV-B and Title IV-E if a parent has committed a serious crime such as killing another of his or her children; felony assault against the child or a sibling; involuntary termination of parental rights for another child; or "aggravating circumstances," as determined by the court [ASFA, 1997]. The law cites abandonment, chronic abuse, and sexual abuse as examples and provides for a judge's discretion even if federal law does not specify circumstances.

Eligibility

Eligibility is the same as that for Title IV-B and Title IV-E. In FY 1999, the federal government appropriated \$275 million for all services under this Act, including those services discussed under Title IV-B.

Nature of the Intervention

The goal of ASFA is to strengthen the child welfare response to the need for child safety, permanency, and well-being. This law speeds up both the termination of the parental rights and the adoption processes (Committee on Ways and Means, 1998).

ASFA requires the termination of parental rights when:

- a child has been in foster care for 15 of the most recent 22 months;
- a child has been determined to be an abandoned infant;
- the parent has been convicted of murder or voluntary manslaughter of his/her own child; or,
- the parent has been convicted of attempting, conspiring, or soliciting to commit murder or voluntary manslaughter (Committee on Ways and Means, 1998).

Three exceptions to this requirement are if:

- the child is placed with a relative;
- the state documents a compelling reason not to file for termination of parental rights; or,
- the state has not provided the necessary services in the case plan within the specified time frames (Committee on Ways and Means, 1998).

The ASFA requires a permanency hearing within 30 days of finding that a child's return home is not recommended. It allows for concurrent planning of reunification and adoption in cases with an unclear resolution, while requiring that a dispositional hearing be moved up from 18 to 12 months. The law provides financial incentives for states to increase adoption of children in the foster care system and provides additional financial incentives for the adoption of children with special health care needs. States must provide health insurance for these children through Medicaid or another program with comparable benefits.

Intended Outcomes/Indicators The law requires DHHS to conduct a study to develop recommendations for a performance based financial incentive system for Title IV-B and Title IV-E. It allows for the expansion of waivers for state child welfare demonstration projects, although it does not define specific goals for these demonstrations in federal law (Committee on Ways and Means, 1998). It requires DHHS to promulgate outcomes measures for the child welfare system and to report on them annually to Congress. The new outcome goals are to:

- reduce recurrence of child abuse and/or neglect;
- reduce the incidence of child abuse and/or neglect in foster care;
- increase permanency for children in foster care;
- reduce time in foster care to reunification without increasing reentry;
- reduce time in foster care to adoption;
- increase placement stability; and,
- reduce placements of young children in group homes or institutions (Federal Register, 1999).

Analysis

Targeted Risk Factors. The ASFA may address several risk factors, including temperament and personality issues, early behavior or adjustment problems, and low socioeconomic status. The provisions of this act speed up the process of stabilizing children in a supportive home environment and are intended to protect them from problematic parenting practices, maltreatment, and attachment problems.

Discussion. The ASFA is the most sweeping amendment to the child welfare laws since P.L. 96-272 in 1980. Just as P.L. 96-272 was reactive to the foster care drift and a foster care system in crisis, ASFA is in response to the 1980 law emphasizing "reasonable efforts" to maintain the family or return the child to his/her biological family. ASFA stresses safety as the overriding factor. It amends the "reasonable efforts" requirement and emphasizes swifter permanency planning and termination of parental rights.

While the goals of this Act enjoy support, this federal law makes major changes in an extremely complex system. Many agencies involved in putting the new law

into operation will need to make simultaneous changes. For example, one major obstacle to maintaining or reuniting families is parental substance abuse. While some may argue that shorter, enforced timeframes for termination of parental rights may provide parents with incentives to enter substance abuse treatment, there are insufficient treatment options to support the current demand on the system. The ASFA requirement may exacerbate this stress.

ASFA will also impact the already overburdened court system. Historically, length of stay in out-of-home care has been attributable in part to delays in the court process. The successful implementation of ASFA relies heavily on court reforms, but adequate funds have not been appropriated for this under ASFA.

Another ongoing problem exacerbated by the requirements of this Act is the need for social worker skill and experience. ASFA will require social workers to develop and implement case plans much faster and make recommendations regarding life decisions for children with less time and less information. Many social workers, recently graduated from college, have little experience. On the job training may be effective; however, Title IV-B has only \$7 million appropriated for training child welfare workers nationwide, and worker turnover is often high in child protective services.

Without adequate and appropriate services available to meet the needs of children and families in the child welfare system, ASFA may not achieve its goals of child safety or permanency. Without adequate preparation and appropriate post-adoption support, permanent placements that are achieved may not be maintained. Supports should be put in place to reduce the unintended consequence of disrupted adoptions.

Discussion of Federal Family Support and Child Welfare Policies

The increasing needs of the child protective services system dominate this area of federal policy. While the language of several federal policies allow funds to be used for both universal and selective prevention programs, in many cases these funds are diverted to treatment focused on preventing out-of-home placement. The ASFA amendments to the Family Preservation and Family Support Act are an example of changing the prevention focus of a program to a more treatment oriented approach. CAPTA, Title II, the only federal child welfare policy with funds earmarked strictly for prevention, has the smallest appropriation.

Managed care strategies are being used increasingly in the child welfare system. This may present both opportunities and challenges. In 1996 the Packard Foundation funded a special child welfare analysis of the impact of state health reforms on children and families in the child welfare system. In the spring of 1998, researchers gathered information on 25 state and community child welfare managed care initiatives. The study found that 23 of the 25 state initiatives focused on children in out-of-home placement and their families. Most states included young children, and children at risk of placement were included in 19 reforms (Schulzinger et al., 1999). Child welfare funds were used in all sites, and many also included Medicaid funds (16 sites) and mental health funds (12

sites). Over half of the sites used case rates, while only three sites used capitation financing. In most sites family involvement in the design of the reform was peripheral.

While managed care provides possibilities to encourage collaboration, problems cited by respondents in this study included a lack of coordination between the child welfare and mental health systems, a lack that caused duplication, gaps, cost shifting, responsibility disputes, confusion for families, inconsistent rates, and confusing policies for providers (Schulzinger et al., 1999). Most children in the child welfare system receive medical and behavioral health care services through Medicaid. States should coordinate the design and implementation of child welfare managed care with state Medicaid managed care initiatives to ensure maximizing the resources from both of these programs.

Policy challenges for the family support and child welfare sector include but are not limited to expanding prevention, improving systems, and providing systems support.

Prevention

- emphasizing the emotional and behavioral health of young children in child welfare programs;
- directing resources to asset based prevention programs that build on family strengths, are family centered and culturally competent;
- protecting these prevention resources from possible redirection to treatment;
- integrating a multidisciplinary, child development focus in child protective services; and,
- significantly increasing the mental health system's focus on early childhood mental health and coordinating it with the child welfare system at both federal and state levels.

Systems

- developing systems of care coordinated with other federal and state programs serving young children and their families;
- providing incentives for states to attract and retain qualified and committed workers;
- increasing funds for improving pre-service and in-service staff training especially in areas of child development, parent-child relationships, and parental substance abuse and mental illness;
- reducing the social worker caseload;
- preparing and supporting workers to function in a managed care environment;
- ensuring that child welfare managed care contracts contain language requiring coordination with other child serving federal programs, especially MCHBG, IDEA Parts B and C, Medicaid, and CHIP; and,
- implementing court reforms including ongoing education of the judiciary in child development and family issues.

System Support

- setting minimum national quality program standards;
- requiring coordination with other child serving systems;
- providing incentives for states to recruit and train qualified foster and adoptive parents;
- increasing the financial reimbursement to foster parents;
- maintaining young children in one stable foster home environment for the duration of the out-of-home care; and,
- providing post-adoption support services.

Notes

- 1 The federal government also supports several smaller programs targeted to child welfare services. They include programs such as the Medical Neglect/Disabled Infants State Grants, which help states respond to the withholding of medical treatment from disabled infants; the Abandoned Infants Assistance Program to demonstrate how to prevent abandonment and to meet the needs of abandoned infants, especially those with AIDS; the Children's Justice Act to help states develop, establish, and operate programs to improve the investigation and prosecution of child abuse and neglect cases; Adoption Opportunities program to aid in the adoption of children with special health care needs; Temporary Child Care and Crisis Nurseries to demonstrate the effectiveness of assisting states to provide temporary nonmedical child care to children who are abused or neglected or who have special health care needs; and child welfare training grants, which are discretionary grants to public and private institutions of higher learning to develop and improve training programs for child welfare workers and service providers.
- 2 The employee must also work at a location in the United States or in any territory or possession of the United States where at least 50 employees are employed within 75 miles.
- 3 Approximately 55 percent of U.S. workers and approximately 47 percent of private sector workers also meet the FMLA length of service and hours-related eligibility requirements.
- 4 These individuals are subject to the jurisdiction of the U.S. Office of Personnel Management or the Congress.
- 5 Spouses employed by the same employer are jointly entitled to a combined total of 12 work weeks of family leave for the birth and care of the newborn child, for placement of a child for adoption or foster care, and to care for a parent with a serious health condition.
- 6 Also, subject to certain conditions, employees may choose or employers may require an employee to use accrued paid leave (such as sick or vacation leave) to cover some or all of the FMLA leave. The employer is responsible for designating if an employee's use of paid leave counts as FMLA leave, based on information from the employee.
- 7 If FMLA leave is for birth, adoption, or foster care, use of intermittent leave is subject to the employer's approval. FMLA leave may be taken intermittently whenever medically necessary to care for a seriously ill family member, or because the employee is seriously ill and unable to work. Special rules apply to employees of local education authorities. Generally, these rules provide for FMLA leave to be taken in blocks of time when intermittent leave is needed or the leave is required near the end of a school term.

- 8 Federal assistance to states for child welfare services had originally been authorized under Title V of the Social Security Act of 1935. The assistance authorization was transferred to Title IV-B in 1967.
- 9 Each state receives a base amount of \$70,000, and additional funds are distributed to the states on the basis of their population under 21 years of age and per capita income (Committee on Ways and Means, 1998).
- 10 Title IV-B, Subpart 2 funds are allocated to the states according to their relative shares of children receiving food stamps, subject to a nonfederal 25 percent match in the previous three years.
- 11 It was further amended by the Child Abuse Prevention Challenge Grant Reauthorization Act of 1989 (P.L. 101-126) and the Drug Free School Amendments of 1989 [P.L. 101-226]. The Community-Based Child Abuse and Neglect Prevention Grants Program was originally authorized by Sections 402 through 409 of the Continuing Appropriations Act for FY 1985 [P.L. 98-473]. The Child Abuse Prevention Challenge Grants Reauthorization Act of 1989 [P.L. 101-126] transferred this program to CAPTA, as amended. A new Title III, Certain Preventive Services Regarding Children of Homeless Families or Families at Risk of Homelessness, was added to the Child Abuse Prevention and Treatment Act by the Stewart B. McKinney Homeless Assistance Act Amendments of 1990 [P.L. 101-645]. In the early 1990s, the act was amended four times and was further amended by the CAPTA Amendments of 1996 [P.L. 104-235], which amended Title I, replaced the Title II Community Based Family Resource Centers program with a new Community-Based Family Resource and Support Program, and repealed Title III, Certain Preventive Services Regarding Children of Homeless Families or Families at Risk of Homelessness.
- 12 The plan must be submitted at the time of the initial grant application and every five years thereafter.
- 13 The CAPTA state plan must address issues such as the following:
 - provisions or procedures for reporting known and suspected instances of child abuse and neglect;
 - procedures for the immediate screening, safety assessment, and prompt investigation of such reports;
 - procedures for immediate steps to be taken to ensure and protect the safety of abused or neglected children and of any other child under the same care who may also be in danger of abuse or neglect, thus ensuring their placement in a safe environment;
 - provisions for immunity from prosecution under state and local laws and regulations for individuals making good faith reports of suspected or known instances of child abuse or neglect;
 - methods to preserve the confidentiality of all records in order to protect the rights of the child and the child's parents or guardians;
 - child abuse citizen review panels;
 - child fatality review panels;
 - provisions and procedures requiring that in every case involving an abused or neglected child that results in a judicial proceeding, a guardian ad litem is appointed, who may be an attorney or a court appointed special advocate (or both);
 - expedited termination of parental rights in the case of any infant determined to be abandoned under state law;

- provisions, procedures, and mechanisms that ensure that the state does not require reunification of a surviving child with a parent who has been found by a court of competent jurisdiction to have committed murder or voluntary manslaughter; to have aided or abetted, attempted, conspired, or solicited to commit murder or voluntary manslaughter; or to have committed a felony assault that results in serious bodily injury to the surviving child or another child of such parent;
 - an assurance that conviction of any one of the felonies listed above constitutes grounds under state law for the termination of parental rights of the convicted parent as to the surviving children (although case by case determinations of whether or not to seek termination of parental rights shall be within the sole discretion of the state);
 - an assurance that the state has in place procedures for responding to the reporting of medical neglect;
 - an assurance that the services to be provided under the grant to individuals, families, or communities, either directly or through referrals, are aimed at preventing the occurrence of child abuse and neglect; and,
 - an assurance or certification that the programs or projects relating to child abuse and neglect under Part B of Title IV of the Social Security Act comply with the CAPTA requirements.
- 14 This lead entity may be an existing public, quasi-public, or nonprofit private entity. In determining which entity to designate, the governor should give priority consideration equally to a Children's Trust Fund board or to an existing entity that leverages federal, state, and private funds.
- 15 Title II grants are allotted as follows: 70 percent on a basis of population under 18 years of age, and 30 percent on the basis in proportion to the amount leveraged by the state from private, state, or other nonfederal sources and directed through the state lead agency in the preceding fiscal year.
- 16 In 1996, 47 states reported using SSBG funds for child care, while 46 states reported using the funds for child protection and home based services.
- 17 Administrative costs are matched at an open-ended 50 percent match rate; training is matched at an open-ended 75 percent match rate.

Child Nutrition

Introduction

Nutrition is important to the health, growth, and development of young children and therefore has significant effects on their social and emotional school readiness. This section discusses three selected federal government programs that address child nutrition: the Food Stamp Program; the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and the Child and Adult Care Food Program (CACFP). Table 5 on the next page presents the interaction of these policies with the four major types of risk factors identified for emotional and social development and school readiness (Huffman et al., 2000).

Food Stamp Program

History and Mission

The Food Stamp Program's primary goal is to allow eligible low-income households to obtain a nutritionally adequate low-cost diet. Federal expenditures for the Food Stamp Program have declined from \$23.5 billion in FY 1996 to \$20.1 billion in FY 1998. The program's benefits are 100 percent federally funded, and federal regulations define benefits and most eligibility standards. However, the states are responsible for day-to-day administration, including eligibility determination, benefit calculation, and food stamp issuance. At the federal level, the Department of Agriculture's Food and Nutrition Service administers the Food Stamp Program (Budget of the U.S. Government, FY 2000, 1999a; Committee on Ways and Means, 1998).

The Food Stamp Act established benefit and eligibility rules for the program in 1972; however, food stamps were not available nationwide until 1975. In the early 1980s, a series of revisions to the program tightened eligibility and focused on holding down costs. The Food Security Act of 1985 [P.L. 99-198] reversed this trend. It liberalized rules and reauthorized the program through 1990. This liberalizing trend continued through the late 1980s and early 1990s. The trend reversed again in 1996, however, when Title VIII of PRWORA increased work and other nonfinancial eligibility requirements, made noncitizens ineligible, expanded enforcement penalties, encouraged electronic delivery of benefits, and increased state flexibility. Overall, it is estimated that \$23.3 to \$28 billion in cumulative savings will result from these changes over the six years through the year 2002 (Committee on Ways and Means, 1998). Under PRWORA most poor, legal immigrant children would have been terminated. However, in June 1997, Congress passed legislation allowing states, at their cost, to continue to provide food stamps to legal immigrants. By late 1997, 11 states had continued benefits for at least some families (CDF, 1998). Federal legislation passed in 1998 restored food stamps to about one-third of the legal immigrants who lost eligibility under PRWORA. Most legal immigrant children, as well as disabled and elderly legal immigrants, regained eligibility. However, legal immigrant parents did not regain eligibility (Carmody and Dean, 1998).

Table 5
Risk Factors and Selected Federal Child Nutrition Policies Affecting
Children's Emotional and Social Development and Readiness for School

Risk Factors	Child Nutrition Policies		
	Food Stamp Program	WIC	Child and Adult Care Food Program (CACFP)
Individual Child	P, D	P, D	P, D
Microsystems:			
Family and Peers	NA	NA	NA
Day Care and School	NA	NA	NA
Exosystem:			
Neighborhood, Community, and Socioeconomic Status	T, I	T, I	T, I

This table presents the interaction of each of the policies listed at the top of the columns with the four major categories for risk factors (individual child, family and peers, day care and school, and neighborhood, community, and socioeconomic status) identified as influencing social and emotional development and school readiness. Each column refers to the legislative language of the policy. The codes used to indicate the policy's interaction with the risk factors are as follows:

- P** denotes *prevention* services, while **T** indicates *treatment* services. Both codes appear if a policy has the potential to deliver both prevention and treatment services. Prevention services include those that would be considered either universal or selective in the Institute of Medicine taxonomy.
- D** denotes a *direct* effect on the risk factors, while **I** indicates an *indirect* effect. Both codes appear if a policy may have both direct and indirect effects.
- NA** indicates *not applicable*.

Eligibility

The program provides food vouchers to households with limited monthly income (generally 130 percent of the federal poverty line) and liquid assets of under \$2,000 (\$3,000 if a household member is elderly). Household members must meet work requirements and be U.S. citizens in most cases. TANF and SSI recipients generally are automatically eligible for food stamps. Food stamp benefits do not affect eligibility for other low-income assistance programs and are not taxed as income (Committee on Ways and Means, 1998).

Nature of the Intervention

Households are expected to spend 30 percent of their net incomes (typically equivalent to 20 to 25 percent of their gross incomes) on food costs. The food stamp benefit is designed to supplement this to allow the household to achieve an adequate low-cost diet. Benefits vary based on household size and net monthly income. In FY 1998, 19.8 million individuals and 8.2 million households received benefits totaling \$20.1 billion (Budget of the U.S. Government, FY 2000, 1999a). This represents a decline from the 25.5 million individuals who received benefits in FY 1996. In FY 1996, the monthly benefits averaged \$73 per person, or about \$183 per household. The maximum benefit for FY

1996 for a three-person household was \$321 per month. The USDA estimates that 86 percent of eligible children were enrolled (Committee on Ways and Means, 1998). Of the 13.2 million children who received food stamps in FY 1996, 37 percent were under 5 years of age (CDF, 1998).

Intended Outcomes/Indicators The intent of the Food Stamp Program is to allow households to purchase enough food to provide an adequate low-cost diet. Indicators that are monitored include the average monthly benefit per person and per household, the number and age of participants, data on the budgets of eligible and potentially eligible households, and the participation rate of eligible households (Committee on Ways and Means, 1998).

Analysis *Targeted Risk Factors.* The Food Stamp Program addresses the risk factor of inadequate nutrition directly and of low socioeconomic status indirectly, based on the assumption that children may not receive sufficient and nutritious food in low-income households. Children who experience even mild malnutrition may suffer from adverse health and development effects that may compromise school readiness (CDF, 1998). The Food Stamp Program, as changed by PRWORA, negatively affects the risk factor of immigrant status because it bars most immigrant parents from receiving Food Stamps (CDF, 1998; Committee on Ways and Means, 1998).

Discussion. The program serves 86 percent of eligible children. PRWORA changes that made eligibility requirements more restrictive may have negative effects on some parents. Statistics track characteristics of households served and the amount of the benefit, but no outcomes or quality standards beyond this have been established. This preventive program may have significant positive impacts on the nutrition of young children and therefore on school readiness.

Policy challenges beyond eligibility requirements include the declining enrollment by eligible families, a decline that may be linked in part to confusion about changes in eligibility for cash welfare under TANF.

Special Supplemental Nutrition Program for Women, Infants, and Children

History and Mission

WIC was created in 1972. It provides nutritional screening and food assistance to pregnant and postpartum women and their infants, as well as to children up to five years of age. In FY 1998, the federal government spent \$3.9 billion, up from \$3.7 billion in FY 1996. The program is funded through the Department of Agriculture's Food and Nutrition Service, but it is administered by state and local health agencies (Budget of the U.S. Government, FY 2000, 1999b; Committee on Ways and Means, 1998).

WIC is federally funded based on annual appropriations. State spending and manufacturers' rebates on distributed products may augment federal expenditures. The program served a monthly average of 7.2 million participants in FY 1996, including women (23 percent of the total recipients), infants (25 percent), and older children (52 percent) (Committee on Ways and Means, 1998). Con-

gress capped WIC in FY 1997 and FY 1998 after 25 years of growth, despite administration requests for increases to serve more of the eligible women and children (CDF, 1998).

Eligibility

Pregnant and postpartum women and their children up to five years of age who are nutritionally at risk (medically verified by a health professional), and who are in households with incomes below 185 percent of the poverty line, are eligible for subsidized food. Eligibility for TANF, Food Stamps, or Medicaid can satisfy the income test, and pregnant women meeting the income test can be "presumptively" eligible until the nutrition risk evaluation is made. The program requires recertification of eligibility periodically, typically every six months after the child's birth (Committee on Ways and Means, 1998).

Nature of the Intervention

WIC provides nutritional screening and food assistance to pregnant and postpartum women and their children up to five years of age. Typically, the recipient gets vouchers for a specific set of foods that meet federal standards. In FY 1996, the national average cost of a WIC food package was just over \$31 per month. Screening, administrative, and other costs were about \$11 per participant. This is the net cost after rebates of over \$1 billion annually from infant formula manufacturers that states obtain under a requirement to pursue "cost containment" strategies (Committee on Ways and Means, 1998).

Intended Outcomes/Indicators

The purpose of WIC is to ensure that pregnant women and young children receive adequate nutrition. Statistics track dollars spent and number of women, infant, and child participants.

Analysis

Targeted Risk Factors. WIC addresses the risk factor of inadequate nutrition directly and of low socioeconomic status indirectly, based on the assumption that pregnant women and young children may not receive sufficient and nutritious food in low-income households. Inadequate nutrition can have adverse effects on the health and development of young children, and therefore on their school readiness (CDF, 1998).

Discussion. The WIC Program recognizes the critical importance of good nutrition for pregnant and breastfeeding mothers and for young children. Although states can limit income eligibility at lower levels than the maximum of 185 percent of the poverty line, they rarely do. Currently the program serves 96 percent of the eligible population (Committee on Ways and Means, 1998). Statistics track the characteristics of recipients and the amount of the benefit, but no outcomes or quality standards beyond this have been established.

Policy challenges include the recent limitations on funding that may result in an inability to serve all eligible mothers and children; the federal requirement that states pursue cost containment strategies; and the flexibility allowed to the states to use income level cut-offs lower than the federal limit of 185 percent of the poverty level.

Child and Adult Care Food Program

History and Mission

CACFP is permanently authorized under Section 17 of the National School Lunch Act of 1946. It provides federal cash subsidies for breakfasts, lunches, suppers, and snacks that meet federal nutrition standards and are served in non-residential child care centers, including programs run by schools and in homes. The program was modified by Title VII of PRWORA of 1996 [P.L. 104-193], which implemented a means test for child care homes and reduced reimbursement rates for higher-income settings (Committee on Ways and Means, 1998; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998). CACFP is an open-ended, authorized entitlement that is 100 percent federally funded. Administered by the Department of Agriculture's Food and Nutrition Service, its cost was \$1.3 billion in FY 1998 (U.S. Department of Agriculture, 2000).

Eligibility

Children under the age of 13 (under age 16 for migrant children and of any age for disabled children) can receive the subsidized food, if their family income is below 185 percent of the poverty line. Prior to PRWORA, all licensed, non-residential child care centers and homes were eligible for subsidies. PRWORA added a means test for home-based child care that requires home-based providers either to be low-income or to be located in a low-income area. All non-profit, Head Start, and school operated centers are eligible, while for-profit centers are eligible only if they receive SSBG funding for at least 25 percent of their enrollment or licensed capacity. (Committee on Ways and Means, 1998).

Nature of the Intervention

The CACFP provides federal subsidies for meals and snacks that are provided in center based and family child care. Meal rates are indexed to inflation and vary by family income, the provider's income, and location. For centers, children in families with incomes below 130 percent of the poverty line receive subsidies of \$0.52 for each snack, \$1.05 for breakfast, and \$1.89 for lunch or dinner. The program provides smaller subsidies for children with family incomes between 130 and 185 percent of the federal poverty line, with even smaller subsidies for other children. For family day care homes, the subsidies do not vary by children's family incomes, but vary between homes that are located in low-income areas or operated by low-income providers and homes that are not (Committee on Ways and Means, 1998).

The majority of children served by this program are between 3 and 6 years of age. However, it can serve children up to age 12 and certain older special groups. PRWORA's means testing is projected to save about \$2.5 billion in total over six years, starting with \$128 million in FY 1997 and growing to \$670 million in FY 2002 (Committee on Ways and Means, 1998). Average daily attendance in CACFP participating child care programs was 2.5 million children in FY 1998. Over 210,000 child care program sites received payments (U.S. Department of Agriculture, 2000).

Intended Outcomes/Indicators

CACFP, as an extension of school based food programs, is designed to ensure that children in out-of-home care settings, especially those from low-income families, receive adequate nutrition. Statistics track dollars spent and number of participants by the settings in which they are served.

Analysis

Targeted Risk Factors. CACFP addresses the risk factor of inadequate nutrition directly and of low socioeconomic status indirectly, based on the assumption that children may not receive sufficient and nutritious food in low-income households. Children who experience even mild malnutrition may suffer from adverse effects on their health and development that can also affect their school readiness (CDF, 1998).

Discussion. Only children in formal licensed or approved nonparental care are eligible. PRWORA's more restrictive eligibility requirements may have negative effects on low-income children whose subsidy was eliminated. Statistics on participants and dollars spent are tracked, but no monitoring, outcomes measurement, or quality standards beyond this have been established.

Discussion of Federal Child Nutrition Policies

Federal child nutrition policies have a direct and significant impact on the important school readiness risk factor of inadequate nutrition. They are anti-poverty programs that address the inability of low-income households to purchase sufficient food to provide an adequate diet for young children. The Food Stamp Program has a broad target population, while the WIC program targets the particularly vulnerable population of children who are in the prenatal period through age four. The income cut-offs (typically 130 percent of poverty for Food Stamps and 185 percent of poverty for WIC) eliminate some children who would benefit from these nutrition programs. In addition, the recent efforts to control spending growth and increase states' flexibility have resulted in lower federal standards and reduced benefits for children. The CACFP, which extends free or subsidized school lunches or other meals to child care settings, has a positive impact in ensuring that children receive nutritious food in out-of-home settings. Challenges in federal child nutrition policies include:

- reducing or eliminating state flexibility that allows states to provide benefits to fewer children;
- reversing the decline in enrollment of eligible families in nutrition programs; and
- specifying requirements concerning nutritional content in program regulations.

Socioeconomic Status

Introduction

The socioeconomic status of young children's families correlates with significant effects on children's health, growth, and development. This section reviews four selected federal programs that affect families' socioeconomic status: Temporary Assistance to Needy Families (TANF), Supplemental Security Income (SSI), the Earned Income Tax Credit (EITC), and the Dependent Care Tax Credit (DCTC). Table 6 on the next page presents the interaction of these policies with the four major types of risk factors identified for emotional and social development and school readiness (Huffman et al., 2000).

Temporary Assistance for Needy Families

History and Mission

Title I of PRWORA of August 1996 [P.L. 104-193] created TANF, which ended the entitlement to cash benefits under Title IV-A of the Social Security Act. Aid to Families with Dependent Children (AFDC), AFDC Administration, the Job Opportunities and Basic Skills Training (JOBS) Program, and the Emergency Assistance Program were replaced with the TANF block grant to the states. Administered by DHHS, TANF provides cash benefits to needy families with children, while requiring parents' efforts to find work and avoid births outside of marriage. TANF was funded and capped at \$16.5 billion annually through FY 2002, slightly above the 1995 level for the programs it replaced (ACF, 1998e; Committee on Ways and Means, 1998; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

In 1997, a program of welfare-to-work grants for TANF recipients was established in the Department of Labor by the BBA of 1997 [P.L. 105-33]. The federal government has provided \$3 billion over two years, most of which requires state matching funds. In addition, the BBA further restricted education and training "work activities" that qualify TANF recipients for continued benefits (CDF, 1998).

Eligibility

Under TANF, states determine the characteristics, income and asset levels, and other eligibility requirements for families that receive benefits. Formerly, under AFDC, federal law defined eligible classes of families and required states to assist these families if their incomes were below limits set by the state (Committee on Ways and Means, 1998).

TANF allows benefits to be provided to families with children under 18 years of age (19 if they are full time students) or that include a pregnant woman, but not unwed mothers under age 18 unless they meet living arrangement and educational requirements. A mother who fails to cooperate in establishing paternity or obtaining child support may have her benefits terminated or reduced. TANF also may not be provided to anyone who fails to assign rights to child and spousal support payments to the state (ACF, 1998e; Committee on Ways and Means, 1998). The receipt of TANF benefits is deemed by the INS as evidence that an

Table 6
Risk Factors and Selected Federal Socioeconomic Status Policies Affecting
Children's Emotional and Social Development and Readiness for School

Risk Factors	Socioeconomic Status Policies			
	TANF	SSI	EITC	DCTC
Individual Child	NA	T, I	NA	NA
Microsystems:				
Family and Peers	P/T, I	T, I	NA	NA
Day Care and School	NA	NA	NA	P, I
Exosystems:				
Neighborhood, Community, and Socioeconomic Status	T, D	T, D	T, D	T, D

This table presents the interaction of each of the policies listed at the top of the columns with the four major categories for risk factors (individual child, family and peers, day care and school, and neighborhood, community, and socioeconomic status) identified as influencing social and emotional development and school readiness. Each column refers to the legislative language of the policy. The codes used to indicate the policy's interaction with the risk factors are as follows:

- P** denotes *prevention* services, while **T** indicates *treatment* services. Both codes appear if a policy has the potential to deliver both prevention and treatment services. Prevention services include those that would be considered either universal or selective in the Institute of Medicine taxonomy.
- D** denotes a *direct* effect on the risk factors, while **I** indicates an *indirect* effect. Both codes appear if a policy may have both direct and indirect effects.
- NA** indicates *not applicable*.

immigrant may be or may become a "public charge" primarily dependent on the government for subsistence. Being deemed a public charge can result in an inability to become a lawful permanent resident and possible deportation (HCFA, 1999d).

Nature of the Intervention

TANF is a cash welfare block grant designed to give states flexibility and end dependence on government benefits by promoting work, marriage, two parent families, and the reduction of out-of-wedlock pregnancies. It institutes a five-year cap (states may opt for a shorter period) on welfare benefits, although states may exempt 20 percent of their caseload. The median maximum monthly benefit among the states for a family of three was \$379 in 1997, with Mississippi (\$120) and Alabama (\$164) at the low end and Alaska (\$923) and New York (up to \$703 depending on location) at the high end (ACF, 1998e; Committee on Ways and Means, 1998).

The target date for implementation of TANF was July 1, 1997, although states could implement their block grant programs sooner. In order to receive their full federal grant, states must spend at least 75 percent of what they spent in FY 1994 on TANF eligible families, and there are incentives for maintenance of ef-

fort levels up to 100 percent. States may transfer up to a total of 30 percent of their TANF block grant dollars to either or both of the CCDBG or to SSBG. However, they may transfer no more than a total of 10 percent to SSBG.¹ (ACF, 1998e; Committee on Ways and Means, 1996; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

TANF makes welfare contingent on work. All able-bodied recipients who have been on welfare for two years must participate in some activity designed to help them become self-supporting. Unless states opt out, non-working parents must participate in community service after two months on welfare. Single parents of children under six years of age who cannot find child care cannot be penalized for failure to work, and states can exempt single parents with children under one year of age. These two exemptions from work requirements, however, do not provide relief from overall time limits. States were penalized if 25 percent of all recipient families were not participating in "work activities" in FY 1997, rising to 50 percent by FY 2002. For two-parent families, the required rate is 75 percent in FY 1997, rising to 90 percent by FY 1999. "Work activities" exclude education (except for those without a high school diploma) and even some vocational training. The required rate of participation in work activities is reduced if a state's caseload is smaller than it was in FY 1995, a situation that exists in most states (ACF, 1998e; Committee on Ways and Means, 1996; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

States continue to set the benefit levels, set asset limits (AFDC set an upper limit), and adopt financial rewards or penalties to provide incentives for work or other desired behavior. The states administer benefits and provide services, and TANF explicitly allows contracting with charitable, religious, or private entities for service delivery (Committee on Ways and Means, 1998).

Several provisions of PRWORA address nonmarital births and single parent households. They include:

- requiring teen mothers to attend school and to live at home or with a responsible adult;
- requiring unmarried mothers to help establish paternity; and,
- providing funds for abstinence education and for bonuses to states for reducing nonmarital births and single parent households (ACF, 1998e; Committee on Ways and Means, 1996; NASW, 1996; Office of the Assistant Secretary for Planning and Evaluation, 1998).

Intended Outcomes/Indicators

TANF's intended outcome is to encourage and enable recipients to enter the workforce, thereby reducing the number of welfare recipients and the cost of public welfare programs. TANF's secondary goals are to reduce non-marital births, teenage parenthood, and single parent households.

Analysis

Targeted Risk Factors. TANF directly addresses the risk factor of low socioeconomic status by providing cash assistance to low-income families. TANF's time limited cash assistance and low benefit levels mean that its impact on the socioeconomic status risk factor is limited. TANF provides a safety net but at such a low level that children in families receiving TANF, while better off than without

it, are generally still at risk based on low socioeconomic status (Collins and Aber, 1997).

TANF indirectly addresses the risk factor of family composition by providing incentives for establishing paternity and reducing both nonmarital births and single parent households. TANF also indirectly addresses the risk factor of low level of maternal education by requiring teen mothers without a high school diploma to attend school. However, its work requirements and limitations on education as a "work activity" may have negative effects on this risk factor for high school graduates.

Discussion. In families receiving TANF, it may have a positive effect on the social and emotional school readiness of young children as it improves family socioeconomic status. However, TANF benefits leave a typical family below the poverty line, and therefore the positive impact is likely to be limited.

TANF eliminated the entitlement to welfare and capped the federal funding available. Although currently the funding is sufficient to provide payments to all those who are eligible and apply, this may not be the case in a future economic recession. Such a shortfall, if not remedied by future allocations, is likely to have negative effects on the socioeconomic status of families and negative effects on the social and emotional school readiness of young children in those families.

TANF's time limits will terminate benefits for some families with young children. Furthermore, these time limits appear to be discouraging some parents of young children from applying for TANF benefits when they are eligible. This lack of welfare benefits in poor families may have negative effects on the school readiness of young children in these families. TANF's limits on the receipt of benefits while a parent is engaged in education or training may impair the longer term earnings potential of such parents and therefore may have negative longer term effects on the school readiness of young children.

Recent reductions in the number of TANF recipients appear to be linked to reduced use of other welfare benefits such as Medicaid and Food Stamps. Potential recipients of benefits under these programs may believe that their ineligibility for TANF or the limits on their TANF eligibility also apply to their eligibility for these programs, although this is not the case. Whatever the reason, the reduction in Medicaid and Food Stamp enrollment by eligible families may harm the social and emotional school readiness of young children in these families.

Because of its direct impact on their children, the quality of child care that families receiving TANF are able to obtain as they go to work or engage in "work activities" may have a greater impact on young children's emotional and social school readiness than TANF's other indirect effects.

Supplemental Security Income

History and Mission

SSI is a means tested, federal income assistance program authorized by Title XVI of the Social Security Act and administered by the Social Security Administration (SSA). Established in 1972 [P.L. 92-603], it replaced the federal/state programs for the aged and blind of the original Social Security Act of 1935 and programs for the disabled that were established under the Social Security amendments of 1950. SSI federalized these programs, building on the Social Security Program's concept of developing a basic national income maintenance system for those who are both aged and blind and for the disabled. In FY 1998, 6.3 million individuals received benefits of \$27.3 billion (Budget of the US Government, FY 2000, 1999a). This represented a decline from the 6.6 million recipients of \$28.3 billion in benefits in FY 1996. In FY 1996, SSI provided monthly cash payments of up to \$470 for individuals or \$705 for couples based on national eligibility standards to needy persons aged and blind, or for disabled persons. Of the 6.6 million recipients served, 958,000 of them were children under 18 years of age (Committee on Ways and Means, 1998).

Eligibility

Eligibility for children has changed several times, most recently in Title II of PRWORA. To understand its impact fully, it is helpful to examine the recent history of SSI eligibility for children.

In 1990, the SSI eligibility criteria for children changed twice, and these changes also affected Medicaid eligibility. In February 1990, the U.S. Supreme Court ruled in the case of *Sullivan vs. Zebley* that the SSA evaluation process subjected children to more restrictive disability standards than it did adults. Previously, children's eligibility had only been judged by medical standards, whereas adult eligibility was determined based either on medical standards or on a functional assessment that indicated an individual was unable to engage in productive work. The Supreme Court decision required the SSA to make functional assessments of children who did not meet the medical standards. In February 1991, new SSA regulations required that functional assessments be added to eligibility determination procedures for children. Also, as part of the settlement, the SSA agreed to readjudicate all decisions of children's eligibility made between January 1, 1980, and February 11, 1991.

A second separate SSI eligibility change came within the same calendar year. In December 1990, in accordance with the Disability Benefits Reform Act of 1984, the SSA issued regulations to revise and expand its medical standards for assessing mental impairments in children by incorporating functional criteria into the standards. The new medical standards expanded categories of mental impairment from 4 to 11 categories, including attention deficit hyperactivity disorder and psychoactive substance abuse disorders.

A GAO report (1995a) found that the number of children receiving disability benefits under SSI more than doubled in a four year period (1989–1993), increasing to 770,500 children in 1993 from 296,300 at the end of 1989. Child SSI beneficiaries increased from 11.5 percent to 19.9 percent of beneficiaries in this time period.²

In 1996, Title II of PRWORA introduced a new SSI eligibility standard through a new definition of childhood disability that states:

- “an individual under eighteen shall be considered to be disabled under SSI if that child has a medically determinable physical or mental impairment, which results in marked and severe functional limitations, and which can be expected to result in death or which has lasted or can be expected to last for a continuous period of at least twelve months; and,
- no individual under the age of eighteen who engages in substantial gainful activity may be considered disabled” (HCFA, 1999a, p. 1).

HCFA further clarified this (HCFA, 1999a) by stating that “In addition to the new definition of disability for children, the law [PRWORA] mandates two changes to current evaluation criteria in SSA regulations. SSA must:

- discontinue the individualized functional assessment for children; and,
- eliminate maladaptive behavior in the domain of personal/behavioral function in determining whether a child is disabled” (Chapter 3, p. 2).

Estimates of the potential impact of these changes vary. While the Social Security Administration estimates that approximately 135,000 children would lose benefits, the Bazelon Center (1998, p. 1) found that “as of May 30, 1998, 147,575 children had been found ineligible [for SSI] under the new rules.” In most but not all states, children’s SSI eligibility status also made them eligible for Medicaid. Therefore, in some states, children who lost SSI would only continue to receive Medicaid if they were found eligible on other grounds. States were required to perform a redetermination of Medicaid eligibility in any case where an individual lost SSI and that loss affected that individual’s Medicaid eligibility (HCFA, 1999a). The CHIP section of the BBA addressed this issue by requiring states to continue Medicaid coverage for all disabled children who were receiving SSI on August 22, 1996, but who lost Medicaid eligibility as the result of 1996 PRWORA changes in the definition of disability (Kaiser Commission, 1997; HCFA, 1999d).

The receipt of SSI benefits by children is deemed by the INS as evidence that an immigrant may be or become a “public charge” primarily dependent on the government for subsistence. Being deemed a public charge can result in an inability to become a lawful permanent resident and possible deportation (HCFA, 1999d).

Nature of the Intervention

SSI provides monthly cash payments based on national eligibility standards adjusted annually for inflation to the needy aged and blind and to disabled persons. Most states supplement the federal benefit, at least for some recipients (Committee on Ways and Means, 1998). For children, funds are paid to designated representative payees (usually parents) for medical or ancillary services or for services that assist the child and family in dealing with the problems created by the child’s disability. SSI funds may be used by parents to purchase wrap-around services or to defray expenses such as for transportation and special adaptive devices or services not considered “medically necessary” and therefore not covered by the child’s health insurance.

Intended Outcomes/Indicators Intended outcomes/indicators are not specified.

Analysis

Targeted Risk Factors. SSI addresses the risk factor of low socioeconomic status directly. It may indirectly address the risk factors of low birthweight and neurodevelopmental delay, other medical problems, temperament and personality problems, and early behavior and adjustment problems by providing parents with resources to purchase selected goods and services. It may address the risk factor of parental psychopathology if a parent qualifies for SSI because of a serious mental illness. It may indirectly interact negatively with the immigrant status risk factor due to the negative implications for immigrants of receiving SSI.

Discussion. The tightening of eligibility standards, such as removing the ability to qualify for SSI based solely on functional assessment, was implemented in an attempt to control program growth and to eliminate the inclusion of some children. This has removed some children with emotional or behavioral problems from the SSI rolls. Nonetheless, the benefit to those children who do receive SSI may be significant to their emotional and social school readiness. These funds may contribute to reducing the economic stress of a disability on the family, thus contributing to the overall social and emotional family environment. One of the key policy challenges for SSI is the identification and implementation of screening and assessment tools that are appropriate to determine eligibility for young children.

Earned Income Tax Credit

History and Mission

The EITC, enacted in 1975, was indexed to inflation in 1987 and significantly expanded in 1990 and 1993. It has the following three goals:

- to offset the impact of Social Security taxes on low-income workers;
- to enhance the value of work (in contrast to welfare and as a complement to the minimum wage); and,
- to increase the financial resources of low-income families with earned income.

The tax credit's benefit to low-income families was \$30.4 billion in 1997. As a tax code provision, administration falls to the Internal Revenue Service (IRS) (Campbell and Parisi, 1999; Committee on Ways and Means, 1998; GAO, 1995c).

Eligibility

Eligibility, as well as the amount of the tax credit, depends on family income and the number of children who meet age, relationship, and residency tests. The EITC targets working families with children where earned income is below \$29,000. To qualify, at least one child under age 19 (or under 24 if a full time student or of any age if permanently and totally disabled) must have lived in the household for more than half the year and must be a son, daughter, step-child, adopted child, grandchild, or foster child of the taxpayer. Unearned income of over \$2,200 makes a taxpayer ineligible for the EITC (Campbell and Parisi, 1999; Committee on Ways and Means, 1998; GAO, 1995b).

Nature of the Intervention

The EITC, calculated as a percentage of earnings, has a maximum value of \$3,656 and is phased out as earnings increase from \$11,930 to a maximum of

\$29,290.³ The tax credit is refundable, meaning that if the credit exceeds the tax filer's tax liability, the difference will be paid to the tax filer as a refund. Of the \$30.4 billion spent in 1997, approximately 80 percent was in refunds. In 1997, 19.4 million tax filers claimed the EITC, and over 70 percent of them were single heads of households (Campbell and Parisi, 1999; Committee on Ways and Means, 1998; GAO, 1997a; GAO, 1996).

An advance payment system has been available since 1979 that allows eligible taxpayers to receive credit in their paychecks rather than waiting to claim refunds when filing tax returns. In 1993 Congress required the IRS to notify eligible taxpayers of this option, which had been little used (Committee on Ways and Means, 1998; GAO, 1997a).

Intended Outcomes/Indicators The EITC's intent is to increase the financial resources of low-income working families and to enhance the value of work. Indicators monitored include the program's cost, the number of tax returns claiming the credit, the characteristics of households claiming the credit, and the use of the advance payment system (Committee on Ways and Means, 1998; GAO, 1995c).

Analysis *Targeted Risk Factors.* By increasing the income of low-income working families, the EITC directly addresses the risk factor of low socioeconomic status.

Discussion. The Earned Income Tax Credit is a significant benefit to low-income families and, because it is specifically targeted at low-income families with children, is an effective complement to the minimum wage, which is not specifically targeted at low-income families. Its maximum annual benefit of less than \$4,000 and its phase-out before annual income reaches \$30,000 limit its impact. Other limitations of the EITC are the need to file both a tax return and the additional EITC form to receive this credit, and the low level of use of the advance payment option.

Dependent Care Tax Credit

History and Mission The DCTC was added to the Internal Revenue Code (section 21) in 1954 and allows an income tax credit for expenses for the care of dependent children and incapacitated persons related to allowing a family caregiver to be employed. The DCTC was expanded a number of times before being tightened by the Family Support Act of 1988. Most notably, this act reduced the age of an eligible child to 13 and required reporting of the child care provider's name, address, and taxpayer identification number. Consequently, the number of tax returns claiming the DCTC dropped from 9 million returns to 6 million returns. Taxpayers received \$2.5 billion in benefits from the tax credit in 1997. As a provision of the tax code, administration falls to the IRS (Campbell and Parisi, 1999; Committee on Ways and Means, 1998).

Eligibility All taxpayers with employment related care expenses for a qualifying dependent are eligible for the tax credit. Expenses for care qualify for the credit only up to the amount of earned income, or, in the case of married taxpayers, the earned income of the spouse with the lesser earnings (Committee on Ways and Means, 1998).

Nature of the Intervention

The DCTC allows a credit for 30 percent (reduced to 20 percent gradually between \$10,000 and \$30,000 of adjusted gross income) of employment related dependent care expenses of up to \$2,400 for one qualifying dependent or \$4,800 for two dependents. Therefore, the maximum benefit is \$720 for one dependent and \$1,440 for more than one. In 1997, the average credit was \$425 on 5.8 million tax returns. The \$2.5 billion in benefits go largely to middle and upper income families, in part because the credit is not refundable. In 1997, approximately 10 percent of the credit's benefit went to families with adjusted gross incomes (AGI) of less than \$20,000, 42 percent went to families with AGI between \$20,000 and \$50,000, and 48 percent went to families with AGI above \$50,000 (Campbell and Parisi, 1999; Committee on Ways and Means, 1996).

Intended Outcomes/Indicators

The DCTC's intent is to relieve some of the burden for working taxpayers who pay for a dependent's care. Monitored indicators include the cost and average size of the benefit, the number of returns claiming the credit, and the household incomes of those claiming the credit (Committee on Ways and Means, 1996).

Analysis

Targeted Risk Factors. By reducing income tax liability, the DCTC directly addresses the risk factor of low socioeconomic status. However, the average amount of the benefit (\$425) and the small portion of the benefit going to low-income families mean that its impact is limited. The subsidy for care that the DCTC provides indirectly affects the nonmaternal care risk factor.

Discussion. The DCTC benefits the middle class family. However, the small amount of the credit received by any taxpayer is unlikely to have a significant impact on children or families, and the much smaller portion that goes to low-income families with young children is highly unlikely to have an effect on low socioeconomic status. The lack of refundability is a key policy challenge that makes the DCTC of little value to low-income families.

Discussion of Federal Socioeconomic Status Policies

Federal policies addressing low socioeconomic status have important effects on the social and emotional school readiness of young children in low-income families. TANF provides benefits, \$16.5 billion per year in total, to families who typically have incomes below the federal poverty line and have no or little earned income. The EITC provides benefits, \$30 billion per year in total, to families with low incomes by enhancing the value of earned income. Because of the disproportionate representation of young children in low-income families, these programs have positive impacts on school readiness. These effects would be enhanced if the benefit amounts to families were increased and if the income eligibility cut-offs were raised to include more families. The minimum wage and the EITC are complementary policies that work effectively together. The minimum wage provides a significant benefit to low-income working families. Although it is a federal policy, it does not involve federal expenditures, and therefore the impact on young children is difficult to assess.

SSI is a targeted program that serves only those with disabilities. Although its impact on the young children that qualify is important, it reaches a small segment

of the birth-to-six year old population. The DCTC, on average, provides a small financial benefit to families. Challenges in federal socioeconomic policies include:

- identifying appropriate screening and assessment standards for young children's eligibility for SSI;
- ensuring access to good quality child care for low-income, working parents, especially those working to meet eligibility requirements for TANF;
- enhancing access to training and education programs so that parents can reach skill levels that will allow them to obtain work that provides economic self-sufficiency;
- restructuring time limits so that they do not discourage eligible families from accessing benefits; and,
- ensuring that funding will be sufficient to serve the whole eligible population in an economic recession.

Notes

- 1 Money transferred to the SSBG must be used for families below 200 percent of poverty and may be used for families who have hit the TANF time limits. To provide for recessions or other emergencies, states may receive matching funds from a \$2 billion contingency fund, borrow from a \$1.7 billion federal loan fund, or save an unlimited amount of their TANF funds for later years.
- 2 The GAO study reported that eligibility applications for children with mental impairments rose faster than for physical impairments after the two 1990 eligibility changes. Applications for children with mental impairments tripled from 3,700 to 12,000 per month and awards for children with mental impairments quadrupled rising from 1,900 to 8,700 per month. After these changes, 60 percent of awards based on medical standards and 82 percent of awards based on functional assessment (Zebley cases) went to children with mental impairments. Two-thirds of the awards for children with mental impairments went to children with mental retardation. Children with what the report labels "behavior problems," defined as attention deficit hyperactivity disorder, personality disorders, autism, and other pervasive developmental delays, accounted for 22 percent of the awards from February 11, 1991, through 1993. The GAO report stated that the revised medical standards accounted for 70 percent of the increase in awards and that the Zebley decision accounted for the remaining 30 percent (GAO, 1995a).
- 3 For FY 1997, the maximum credit for a tax filer with one child was \$2,210, phased in at 34 percent of earnings up to \$6,500 and phased out on earnings from \$11,930 to \$25,760. The maximum credit for a tax filer with more than one child was \$3,656, phased in at 40 percent of earnings up to \$9,140, and phased out on earnings from \$11,930 to \$29,290. Obtaining the credit requires filing an extra form with one's tax return (Campbell and Parisi, 1999; Committee on Ways and Means, 1998). Nine states have enacted refundable Earned Income Tax Credits that further enhance low-income families' earnings (CDF, 1998).

Conclusions: Toward a System of Early Childhood Care

Examining federal policies that affect the social and emotional development of young children and their readiness for school is not new. In the 1990s there were a number of landmark reports. Examples include the following:

Beyond Rhetoric: The Report of the National Commission on Children (1991) recommended "changes in the organization, administration, implementation and budget of programs at all levels of government to encourage a more collaborative and comprehensive service delivery system" (p. 81). Specific suggestions included coordination of child policies within the executive branch, creation of a joint congressional committee on children and families to coordinate across authorizing and appropriating committees, decategorizing federal programs to encourage cohesion and flexibility in children's programs, uniform eligibility criteria, incentives for coordination at the local level, accountability measures that focus on child well-being, increased investment in prevention, and increased salaries and training for early childhood and child welfare workers coupled with incentives for demonstrated competence.

Heart Start in 1992 found that "though familiarity with letters and numbers and a broad vocabulary is helpful, a specific set of social and emotional characteristics is even more basic to school readiness" (p. 1). The report recommended universal health care coverage, the integration of health and child care knowledge, paid parental leave, stronger federal standards for child care, higher wages for child care workers, continuity of caregivers, parent education and family resource programs, an adequate standard of living, and community-based integrated services for young children with more severe needs.

Goals 2000, Educate America Act (DOE, 1994) placed school readiness at the top of the agenda and cited the following three objectives to help children enter school ready to learn: (1) access to high quality and developmentally appropriate pre-school programs, (2) enabling every parent to be a child's first teacher through access to the training and support parents need and (3) providing children with needed nutrition, physical activity, and health care, and reducing the number of low birthweight babies through improved prenatal care.

In April 1994, *Starting Points*, a report of the Carnegie Task Force on Meeting the Needs of Young Children, stated that "Our nation's infants and toddlers and their families are in trouble" (p. xiii). David Hamburg, Carnegie Corporation president, declared that "In the United States . . . the crucially formative years of early childhood have become a time of peril and loss for millions of children and their families" (p. vii). The Carnegie Task Force concluded that action was needed in the following four areas: promoting responsible parenthood, guaranteeing quality child care choices, ensuring good health and protection for young children, and mobilizing communities to support young children and their families. Specific recommendations included expanding community-based parent education and support programs for families with infants and toddlers; strengthening the FMLA of 1993 by expanding coverage to employers of under fifty

workers, and providing partial wage replacement; increasing federal investments in quality and affordable child care; making the DCTC refundable for some families; offering training and improved salary for child care workers; home visiting to first time parents; expanding WIC; expanding parent education and parent support programs; creating family and child centers; expanding Head Start to infants and toddlers; creating a high level federal coordinating mechanism; and calling upon leaders in the public and private sectors to work together to ensure that children under three years of age receive the care and protection they need and deserve.

Years of Promise (1996), a report of the Carnegie Task Force on Learning in the Primary Grades, examined all the forces that contribute to children's learning and development from three to ten years of age. It recommended a five-point program that included (1) promoting children's learning in families and communities by providing parent education and support programs, (2) a commitment to high quality public and private early care and education programs for children ages three through five supported through coordinated financing, (3) creating effective elementary schools and school systems, (4) promoting high quality children's television and electronic media, and (5) linking the key learning institutions into a comprehensive, coordinated education system. It urged more public financing to improve the quality and availability of early care and education.

Although focused on children of older age groups, other studies also contribute important lessons to inform this discussion. Findings from the Robert Wood Johnson Mental Health Services Program for Youth cautioned that barriers to service integration at the local level are formidable, and the Casey New Futures Program recommended finding the path of least resistance for meaningful systems change.

So this report is not alone in recommending a new course of action. The efforts of many colleagues, the lessons they have learned, and the recommendations they have made help to inform the ongoing process of promoting young children's social and emotional development and preparing children for school readiness.

What Is the Current State of Affairs?

This paper's review of selected federal policies that affect the social and emotional development of young children and their readiness for school has identified both opportunities and challenges within the system. The study has examined individual policies within the five domains of child health, early childhood care and education, family support and child welfare, nutrition, and socioeconomic status and has made recommendations for change within each domain. The purpose of this section is to highlight issues that cross policy domains and to make recommendations to address them.

Opportunities Exist

First, it is apparent from this review that the federal government is making a major contribution to the social and emotional development of young children and their families. Many of the policies discussed in this report articulate a commit-

ment to a federal responsibility for the well-being of America's children, and the federal government has made many advances over the past decade that improve the lives of young children and their families. The Medicaid expansions, the passage of CHIP, and demonstration programs such as Starting Early Starting Smart are examples of commitment to improving health and emotional development.

In the early childhood care and education area, the Early Head Start program has targeted the most important years from birth to age three for intervention. Part C of IDEA continues to provide early intervention services and, in addition, the early 1990s saw the extension of an entitlement to a free, appropriate public education to all eligible children ages three to five. In the family support and child welfare domain, the FMLA took a first step toward acknowledging the importance of parents' time with their young or sick children. The ASFA stressed the importance of a safe, secure, and stable environment for children.

Evidence of greater federal government awareness of the need for collaboration exists in increasing efforts to encourage better federal interagency coordination. There are a number of building blocks within the language of numerous federal policies. The MCHBG, Medicaid, and IDEA are just a few examples of policies that require coordination with other federal programs in the delivery of services to young children and their families. The government is directing cross-agency efforts at a number of critical issues ranging from program implementation to management information systems improvements and statistics projects.

The mental health and emotional development of children have received the attention of the president, the vice president, and their wives. The recently convened White House Conference on Mental Health included an acknowledgement that the emotional development and mental health of children are directly affected by early childhood experiences. The advances in neuroscience and infant brain development now support what child development experts have been saying for years. The integration of the science of early childhood has underscored the importance of young children's relationships with significant adults.

Some Challenges Exist

Recent changes in federal policies present challenges and raise unanswered questions about their impact on young children's social and emotional development and school readiness. Without question, PRWORA is one of the most influential policies passed in the 1990s. As discussed in this report, it has affected child policy across all five policy domains. The TANF program eliminated the entitlement to cash welfare benefits that existed under AFDC and established time limits and work requirements. PRWORA changed eligibility standards for SSI that eliminated some children from the program and made it more difficult for children to qualify. The legislation reduced the funding for quality initiatives and relaxed quality standards for child care services supported through the CCDBG. It also made changes that affected the eligibility of immigrant children and their families for TANF and other programs. The impact of these changes on young children is still largely unknown. However, there is the potential for some of the changes to result in stressful situations for parents and their young children that may increase developmental risk.

Some policies, while taking a step forward, may have mixed effects depending on implementation. For example, the option for states to create non-Medicaid CHIP programs allows states to offer a health insurance benefit package that may be less comprehensive than Medicaid and may bypass the EPSDT requirements. However, the flexibility may free states to create special innovative programs.

Other policies such as the Government Performance and Results Act (GPRA) of 1993 present challenges to the research community to develop appropriate outcomes measures of both child and family well being. Although these efforts may improve the effectiveness and quality of some programs, they may also provide challenges for programs whose benefits are hard to measure and document as the result of inadequate management information systems.

Issues in Creating a System of Early Childhood Care

1. First, as this study shows, early childhood issues cut across a number of different disciplines including but not limited to child development, mental health, education, child welfare, public health, nutrition, and economic security. Each system has its own culture, historical roots, values, and approaches. There are, however, commonly held beliefs about the importance of early relationships and their impact on emotional and social development, the influence of family socioeconomic status, and the importance of the cultural context.

Recommendations

- There is a need for the design and implementation of a seamless, multidisciplinary system of early childhood care that transcends traditional policy boundaries.
 - There is a need for more opportunities for cross-discipline thinking and planning at all levels of government. Workers in each policy domain should have an awareness and appreciation for the roles and responsibilities of other personnel and agencies in the system.
 - There is a need for demonstration programs to test new designs and implementation strategies that build on coordination mechanisms already existing in many federal policies. For example, some states are using models that employ generalists to coordinate policy at a systems level and information and referral at the individual level. There is a need for studies of their effectiveness using common methods and measures.
 - There is a need for scheduling national conferences or professional meetings so that pre- or post-sessions might overlap and provide opportunities for multidisciplinary participation. This could facilitate contacts among policy makers and systems managers beyond their own domains and areas of expertise. The states should also replicate this multidisciplinary participation.
2. Existing policies are not fully implemented. The language of many federal policies articulates a commitment to elements essential to a coordinated system of early childhood care. However, the requirements often are not enforced. For example, the development of EPSDT and the sense from states that it was an "unfunded mandate" affected its implementation. Coordinating councils called for under IDEA, Part C do not consistently operate well across the states.

Recommendations

- There is a need to evaluate the effectiveness of existing coordination mechanisms at both the federal and state levels and to develop cross-domain best practices and opportunities for interactive exchange of ideas.
- There is a need to ensure that programs are implemented with fidelity to the original model. Therefore the individuals and agencies responsible for implementation should participate in the design and development of the program. There is a need for adequate resources for state level implementation and the development of incentives for state participation.

3. Federal or foundation-sponsored programs are not brought to scale. For example, although Head Start has expanded in the 1990s, it is still not funded at a level that allows service delivery to all eligible children or expansion to all children with similar risk-factor profiles.

In *Common Purpose*, Lisbeth Schorr (1997) discusses the practical aspects of policy implementation and bringing programs that do work to scale. She points out that foundations are becoming increasingly aware of the risk of overemphasizing innovation while underemphasizing the challenges of implementation on a large scale. Foundations have been addressing these issues through projects such as the Pew Charitable Trust and the Robert Wood Johnson initiative "Replication and Program Services, Inc.," as well as the Pew and Rockefeller Foundation's "Going to Scale" project.

Recommendations

- There is a need to increase commitment and efforts focusing on the replication of programs that have demonstrated effectiveness through rigorous research.
- There is a need to document and study the process as well as the structure of demonstration projects, including both facilitating factors and barriers to implementation. This is particularly important in light of devolution of responsibility, where the unique attributes of each state or local site require adaptation of implementation processes.

4. New federal policies often place additional responsibilities on fragile systems. Both the early childhood care and education system and the child protective services system exemplify this problem.

These systems must constantly adapt to changing realities. Two policy changes discussed in this paper illustrate this point. PRWORA revolutionized the public welfare system in this country. Changes to work requirements that were made through this legislation have had ramifications in a number of areas. No system has felt the impact more than early childhood care and education. PRWORA combined child care funding streams and did increase funding for child care by \$4 billion over six years. However, it simultaneously increased both the age of eligible children and the income eligibility requirements. These actions, along with new work requirements, created an increase in the demand for services challenging the system's flexibility by creating a need for increases in resources such as qualified staff and appropriate space. The legislation also reduced the quality set-aside and eliminated the language that required states to

pay market rates for child care slots. PRWORA also affected Head Start. The partial day, partial year nature of the Head Start program, as implemented in some areas, must change to support the needs of full-time working parents.

The ASFA significantly impacted the child protective services system by placing strict timelines on life altering decisions made on behalf of children. While meant to address system delays in establishing and implementing a permanent plan for children, the legislation may in fact result in the unintended consequence of clogging the system even further by imposing requirements that, of necessity, must rely on the courts. However, the Act did not address the long-term problems of training, technical assistance, and additional resources for an overburdened judicial system commensurate with the new deadlines and responsibilities.

Recommendations

- There is a need for an investment of resources to improve the status of the early childhood workforce. The child care, family support, and child protective systems especially need an infusion of resources to recruit sufficient numbers of qualified candidates, provide quality pre-service and in-service training, and create opportunities for cross-disciplinary learning, adequate compensation, excellent supervision, and incentives for encouraging high quality job performance.
- There is a need for enlisting institutions of higher education, especially those granting associate's and bachelor's degrees, to improve the education and practical experience of early childhood students and professionals.
- There is a need to enhance the motivation of early childhood workers to excel and continue to work in the field. Programs that highlight "unsung heroes," such as the Robert Wood Johnson Community Health Leadership Program, should be developed to recognize individuals in the early childhood field. Leadership awards and training institutes at both national and state levels should focus on nurturing those who work on behalf of young children and their families.

5. There is growing recognition that the knowledge base underlying the various early childhood disciplines and services has substantial common ground. The National Academy of Sciences and the Institute of Medicine have established a Committee on Integrating the Science of Early Childhood that will be issuing its report in fall 2000. Findings in the fields of neuroscience and brain development are validating much of what social scientists and practitioners have realized over the years. Multidisciplinary research and the integration of knowledge are needed to continue progress in the early childhood field. Support for efforts to translate research into best practices and to communicate research and its application to practitioners is essential. It is necessary to distill lessons from both the federal government and foundation sponsored research and demonstration projects to inform the development of best practices and an integrated system of care.

Recommendations

- There is a need to increase attention to and provide resources for early childhood clinical research to inform policy. Well designed cross-domain studies are needed to define what works for whom, when, and why. Studies should include evaluation of appropriate service types, duration, and intensity.
 - There is a need to develop an early childhood service system research capacity. There is an increasing demand for rigorous studies of the organization and financing of early childhood services coupled with an analysis of performance based outcomes and quality of care measures. Because of the interdependent nature of the early childhood service delivery system, this research must span policy domains.
 - There is a need to support the National Advisory Mental Health Council Workgroup (1998) recommendation to "stimulate research on how changes in social and economic systems, policies, and laws as well as social and cultural norms may affect the prevention of mental disorders" and respond to their concerns regarding the need for research to inform decisions about the provision, cost, financing, and improvement of mental-health preventive services by:
 - expanding the NIMH program of assessment and capacity building to provide impetus to this area of research;
 - encouraging rigorous descriptive studies of variations in service financing, organization, and delivery across settings; and,
 - supporting translational research bridging the gap between research and practice.
 - There is a need to support coordinated multi-site research projects that address common research questions, employ common measures and methods, and report findings both within and across sites. Such research has the potential to make major contributions to the early childhood field. Topics such as the impact of managed care on young children and their families would benefit from this type of study. This process creates rich data sets and provides a secondary benefit of enhancing the research infrastructure by developing teams of researchers across the country working together to improve the quality of research and to develop more generalizable findings.
 - There is a need to encourage rigorous qualitative studies of variations in the financing, organization, and delivery of early childhood services across policy domains. Such studies should examine how states are using their federal funds, how they coordinate federal programs at the state level, the effectiveness of these mechanisms as well as the purposes and amounts of state supplemental early childhood funding.
 - There is a need to synthesize and disseminate findings from both federal and foundation sponsored studies on early childhood issues.
6. It is important to identify champions of these efforts in the highest levels of government, the philanthropic community, and business. Leaders in the social and medical sciences must join those in other sectors of society to emphasize the importance of early childhood experience on future success in education

and in the workplace. It is crucial to communicate this message through all possible channels.

Recommendations

- There is a need to meet with members of Congress and congressional staff to discuss the importance of early childhood experience and the need for coordination of federal policies and programs across policy domains.
- There is a need to publicize the link between early childhood experience and preparation for school success in the media.

Final Thoughts

These are but a few examples of the many reforms needed to develop a fully functioning system of early childhood services and supports. There are significant resources to draw on, and there are many building blocks in place in the federal system. The research for this guide has identified enormous resources and energy dedicated to reducing risk factors for poor transitions to school. A number of federal departments including Health and Human Services, Education, Agriculture, and Labor have programs that address school readiness issues. At the federal level, efforts to develop more interagency collaboration are under way. For example, the Federal Interagency Forum on Child and Family Statistics is developing a set of comprehensive integrated indicators for the well being of children. There are committed and extremely capable leaders in both the public and private sectors, and the public is more interested and concerned about the linkage between early life experiences and future outcomes than ever before.

But the challenges loom large. The philosophical belief that government should intervene only in the face of parental failure limits resources and is slow to change. At the federal level, responsibility for early childhood policy is divided across a number of congressional committees. Devolution of policy making and responsibility to the state level offers unique opportunities. Long established roles are changing, and it is essential to negotiate new relationships among levels of government. Increasingly, states have greater flexibility in designing programs and delivering services. Many states are engaged in new and innovative efforts to address school readiness, and some are moving toward integrated, comprehensive service systems for young children. However, changing federal-state relationships and new arrangements for the allocation of federal resources have not benefited all young children and their families.

So what is the answer to the question, "Do federal policies adequately address the emotional and social development and school readiness of young children?" Based on the research for this guide, the answers are, "Somewhat," "Maybe," and "Not really." If the question is reframed to ask, "Do federal policies taken as a whole form a system of services and supports that foster the emotional and social development necessary for success in school?" the answer is, "No, not yet." However, by building on the experience and hard work of many individuals in the past, coupled with the energy and commitment of those who are now addressing these questions, there is reason to believe that they will.

References

- Administration for Children and Families. (1996). *Head Start program performance standards: Final rule (45 CFR Part 1304)*. Washington, DC: U.S. Department of Health and Human Services, Administration on Children, Youth and Families.
- Administration for Children and Families. (1998a). *Fact sheet: Child Care and Development Fund (CCDF)*. Retrieved June 4, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/ccfund.htm>.
- Administration for Children and Families. (1998b). *Fact sheet: Head Start*. Retrieved June 4, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/headst.htm>.
- Administration for Children and Families. (1998c). *Fact sheet: Head Start statistical fact sheet*. Retrieved June 4, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/hsfs.htm>.
- Administration for Children and Families. (1998d). *Fact sheet: Social Services Block Grant (SSBG)*. Retrieved June 8, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/ssbg.htm>.
- Administration for Children and Families. (1998e). *Fact sheet: Temporary Assistance for Needy Families (TANF)*. Retrieved June 4, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/tanf.htm>.
- Administration for Children and Families. (1998f). *Fact sheet: Protecting the well-being of children*. Retrieved June 4, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/opa/facts/chilwelf.htm>.
- Administration for Children and Families. (1998g). *Fact sheet: Head Start 1998*. Retrieved May 28, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/hsb/facts98.htm>.
- Administration for Children and Families. (1998h). *Head Start program performance measures: Second progress report*. Washington, DC: U.S. Department of Health and Human Services, Administration on Children, Youth and Families.
- Administration for Children and Families. (1998i). *Fact sheet: Early Head Start*. Retrieved May 28, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/hsb/erlyhsfs.htm>.
- Administration for Children and Families. (1998j). *Overview of the Early Head Start research and evaluation project*. Retrieved May 28, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/rde/ehsover.htm>.
- Administration for Children and Families. (1998k). *Child Care and Development Fund annual report: Form 800*. Retrieved March 26, 1999, from the World Wide Web: <http://www.acf.dhhs.gov/programs/ccb/policy/800form.htm>.
- Administration for Children and Families. (1998l). *Child care quarterly case record form: ACF - 801*. Retrieved March 26, 1999, from the World Wide Web: <http://www.acf.dhhs.gov/programs/ccb/systems/new801.htm>.
- Administration for Children and Families. (1999). *Research and Statistics: 1999 Statistical Fact Sheet*. Retrieved May 16, 2000 from the World Wide Web: http://www2.acf.dhhs.gov/programs/hsb/research/99_hsfs.htm.
- Adoption and Safe Families Act of 1997, Public Law No. 105-89, 1997.

- Akers, A.L., and Roberts, R.N. (1999). The use of blended and flexible funding in Part C Programs at the Community Level. *Infants and Young Children*, 11(4), 46–52.
- Association of Maternal and Child Health Programs. (1999a). *The Title V Maternal and Child Health Services Block Grant*. Retrieved August 26, 1999, from the World Wide Web: <http://www.amchp1.org/MCHBlockGrant.html>.
- Association of Maternal and Child Health Programs. (1999b). *The Title V Maternal and Child Health Services Block Grant works for all mothers and children*. Retrieved September 29, 1999, from the World Wide Web: <http://www.amchp1.org/MCHGrantsWork.html>.
- Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).
- Barthel, J. (1991). *For children's sake: The promise of family preservation*. New York: Edna McConnell Clark Foundation.
- Bazelon Center for Mental Health Law. (1998). *Children's SSI Program*. Retrieved August 11, 1998, from the World Wide Web: <http://www.bazelon.org/kidsssi.html>.
- Brown, W., and Conroy, M. (1999). Entitled to what? Public policy and the responsibilities of Early Intervention. *Infants and Young Children*, 11(3), 27–36.
- Budget of the United States Government, Fiscal Year 2000. (1999a). *Income security*. [WAIS Document: DOCID: f:2000_bud.bud25.wais, Section 25, pp. 247–51]. Retrieved April 13, 2000, from the World Wide Web: <http://frwebgate3.access.gpo.gov/cgi-bin/waisgate.cgi?WAISdocID=4895113250>.
- Budget of the United States Government, Fiscal Year 2000. (1999b). *Outlays for payments for individuals by category and major program: 1940–2004*. [WAIS Document: DOCID: 2000_tab_hist-44, Historical Tables, Table 11.3, pp. 181–202]. Retrieved April 14, 2000, from the World Wide Web: <http://frwebgate5.access.gpo.gov/cgi-bin/waisgate.cgi?WAISdocID=0136215889>.
- Campbell, D., and Parisi, M. (1999). Individual income returns, 1997: Statistics of income overview. *Statistics of income bulletin*, Publication 1136, Fall, 1999. Retrieved April 12, 2000, from the World Wide Web: http://www.irs.ustreas.gov/plain/tax_stats/soi/soi_bul.html.
- Carmody, K., and Dean, S. (1998). *New federal food stamp restoration of legal immigrants: Implications and implementation issues*. Washington, DC: Center on Budget and Policy Priorities. Retrieved September 7, 1999, from the World Wide Web: <http://www.cbpp.org/71098fs.htm>.
- Carnegie Task Force on Meeting the Needs of Young Children. (1994). *Starting points: Meeting the needs of our youngest children: The report of the Carnegie Task Force on meeting the needs of young children*. New York: Carnegie Corporation of New York.
- Carnegie Task Force on Learning in the Primary Grades. (1996). *Years of promise: A comprehensive learning strategy for America's children: The report of the Carnegie Task Force on Learning in the Primary Grades: Executive summary*. New York: Carnegie Corporation of New York.
- Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration. (1999). *Contracting for managed substance abuse and mental health services: A guide for public purchasers*. Retrieved September 20, 1999, from the World Wide Web: <http://www.samhsa.gov/oas/tap22.1/chapteriii-bbav-15.htm>.
- Child Abuse Prevention and Treatment Act. (1996). Retrieved November 10, 1998, from the World Wide Web: <http://www.acf.dhhs.gov/programs/cb/policy/capta/htm>.

- Children's Defense Fund. (1995). *Managed care and children's health: An analysis of early and periodic screening, diagnosis, and treatment services under state Medicaid managed care contracts*. Washington, DC: Children's Defense Fund.
- Children's Defense Fund. (1998). *The state of America's children: Yearbook 1998*. Washington, DC: Children's Defense Fund.
- Child Welfare League of America. (1999). *Children '99: Countdown to the Millennium Fact Sheet*. Retrieved September 4, 1999 from the World Wide Web: <http://www.cwla.org/cwla/publicpolicy/1999national factsheet.html>.
- Collins, A., and Aber, J.L. (1997). How welfare reform can help or hurt children. *Children and welfare reform: Issue brief 1*. New York: National Center for Children in Poverty, Columbia School of Public Health.
- Commission on Family and Medical Leave. (1996). *A workable balance. Report to Congress on Family and Medical Leave Policies*. Washington, DC: U.S. Department of Labor.
- Committee on Ways and Means, U.S. House of Representatives. (1995). *Compilation of the Social Security laws: Including the Social Security Act, as amended, and related enactments through January 1, 1995*. Washington, DC: U.S. Government Printing Office.
- Committee on Ways and Means, U.S. House of Representatives. (1996). *1996 green book: Background material and data on programs within the jurisdiction of the Committee on Ways and Means*. Washington, DC: U.S. Government Printing Office.
- Committee on Ways and Means, U.S. House of Representatives. (1998). *1998 green book: Background material and data on programs within the jurisdiction of the Committee on Ways and Means*. Washington, DC: U.S. Government Printing Office.
- Congressional Research Service. (1993). *Medicaid source book: Background data and analysis (1993 update)*. Washington, DC: U.S. Government Printing Office.
- Cost, Quality & Child Outcomes Study Team. (1995). *Cost, quality, and child outcomes in child care centers, Executive summary, second edition*. Denver, CO: Economics Department. University of Colorado at Denver.
- Cost, Quality & Child Outcomes Study Team. (1999). *The children of the cost, quality, and outcomes study go to school, Executive summary*. Chapel Hill, NC: Frank Porter Graham Child Development Center, University of North Carolina.
- Department of Education, Office of Educational Research and Improvement. (1993). *All children ready to learn: Toward the national education goals and high standards for all students*. Champaign, IL: Clearinghouse on Elementary and Early Childhood Education (ERIC).
- Department of Education. (1994). *Title I: National Education Goals, Sec. 102: National Education Goals*. Retrieved September 29, 1999, from the World Wide Web: <http://www.ttrc.doleta.gov/cgi-bin/lgis-title.cgi LGIS=G2K&TITLE=I>.
- Department of Education. (1999). *National evaluation of the Even Start Family Literacy Program, 1998*. Retrieved September 29, 1999, from the World Wide Web: <http://www.ed.gov/pubs/EvenStart>.
- Department of Health and Human Services, Office of the Inspector General. (1997a). *Medicaid managed care and EPSDT*. May 1997. OEI-05-93-00290.
- Department of Health and Human Services. (1997b). *Strategic plan*. Retrieved April 13, 2000, from the World Wide Web: <http://aspe.hhs.gov/hhsplan/97plan/intro.htm#intro>.
- Department of Labor. (1995). *What is the Family and Medical Leave Act, and to whom does it apply?* Retrieved September 29, 1999, from the World Wide Web: http://www.dol.gov/dol/allcfr/ESA/Title_29/Part_825/29CFR825.101.htm.

- Department of Labor. (1998). *The Family and Medical Leave Act of 1993, Fact Sheet No. 028*. Retrieved November 2, 1998, from the World Wide Web: <http://www2.dol.gov/dol/esa/public/regs/compliance/whd/whdfs28.htm>.
- Federal Register. (1999). August 20, 1999, Vol. 64.
- Fischer, F. (1995). *Evaluating public policy*. Chicago, IL: Nelson-Hall.
- Forsythe, P. (1992). Homebuilders and family preservation. *Children and Youth Services Review*, 14, 37-47.
- Fox, H.B., McManus, M.A., Almeida, R.A., and Lesser, C. (1997). Medicaid managed care policies affecting children with disabilities: 1995 and 1996. *Health Care Financing Review*, 18(4), 23-36.
- Fox, H.B., McManus, M.A., and Almedia, R.A. (1998). Managed care's impact on Medicaid financing for early intervention services. *Health Care Financing Review*, 20(1), 59-72.
- General Accounting Office. (1995a). *Supplemental Security Income: Recent growth in the roles raises fundamental program concerns*. Washington, DC: Government Printing Office. Retrieved April 5, 2000, from the World Wide Web: <http://frwebgate.access.gpo.gov/cgi-bin...5067.txt&directory=/diskb/wais/data/gao>.
- General Accounting Office. (1995b). *Earned Income Credit: Noncompliance and potential eligibility revisions* [Testimony, 06/08/95]. Washington, DC: Government Printing Office. Retrieved June 2, 1998, from the World Wide Web: <http://frwebgate.access.gpo.gov>.
- General Accounting Office. (1995c). *Earned Income Credit: Targeting to the working poor* [Briefing Report, 3/31/95]. Washington, DC: Government Printing Office. Retrieved June 2, 1998, from the World Wide Web: <http://frwebgate2.access.gpo.gov>.
- General Accounting Office. (1995d). *Child welfare: Opportunities to further enhance family preservation and family support activities*. (GAO/HEHS-95-112). Washington, DC: Government Printing Office.
- General Accounting Office. (1996). *Earned Income Credit: Profile of tax year 1994 credit recipients* [Briefing Report, 6/13/96]. Washington, DC: Government Printing Office. Retrieved June 2, 1998, from the World Wide Web: <http://frwebgate2.access.gpo.gov>.
- General Accounting Office. (1997a). *Earned Income Credit: Claimants' credit participation and income patterns, years 1990 through 1994* [Letter Report, 5/16/97]. Washington, DC: Government Printing Office. Retrieved June 2, 1998, from the World Wide Web: <http://frwebgate2.access.gpo.gov>.
- General Accounting Office. (1997b). *Child welfare: States' progress in implementing family preservation and support services*. (GAO/HEHS-97-34). Washington, DC: Government Printing Office.
- General Accounting Office. (1998). *Healthy Start: Preliminary results from national evaluation are not conclusive*. Washington, DC: Government Printing Office.
- Head Start Act. (1998). *Head Start Act as amended 10/27/98 (42 USC 9801 et seq.)*. Washington, DC: Government Printing Office.
- Health Care Financing Administration. (1998). *Overview of the Medicaid program*. Retrieved May 17, 2000 from the World Wide Web: <http://www.hcfa.gov/medicaid/mover.htm>.
- Health Care Financing Administration. (1999a). *Fact sheet #2. Link between Medicaid and SSI coverage of children under welfare reform*. Retrieved March 23, 1999, from the World Wide Web: <http://www.hcfa.gov/medicaid/wrfs2.htm>.

- Health Care Financing Administration. (1999b). *Medicaid services*. Retrieved May 16, 2000 from the World Wide Web: <http://www.hcfa.gov/medicaid/mrservice.htm>.
- Health Care Financing Administration. (1999c). *Maternal and child health services*. Retrieved April 5, 2000, from the World Wide Web: <http://www.medicaid.state.al.us/about/98anrep/maternal.htm>.
- Health Care Financing Administration. (1999d). *INS Public Charge Determination, 5/26/99*. Retrieved April 11, 2000, from the World Wide Web: <http://www.hcfa.gov/init/ch052699.htm>.
- Health Resources and Services Administration. (1997). Testimony of Audrey H. Nora, M.D., M.P.H., Associate Administrator for Maternal and Child Health, Health Resources and Services Administration, before the House Subcommittee on Labor, Health and Human Services, Education Committee on Appropriations, October 29, 1997. Retrieved April 18, 2000, from the World Wide Web: <http://www.hrsa.dhhs.gov/newsroom/speeches/brightfut.htm>.
- Health Resources and Services Administration. (1999). *Fact sheet: HRSA's Maternal and Child Health Bureau*. Retrieved April 5, 2000, from the World Wide Web: <http://www.hrsa.dhhs.gov/newsroom/factsheets/mchb.htm>.
- Huffman, L.C., Mehlinger, S.L., and Kerivan, A.S. (2000). *Risk factors for academic and behavioral problems at the beginning of school*. See this report.
- Kagan, S.L., Moore, E., and Bredekamp, S. (Eds.). (1995). *Reconsidering children's early development and learning: Toward common views and vocabulary*. Goal 1 Technical Planning Group Report. Washington, DC: National Education Goals Panel.
- Kaiser Commission on the Future of Medicaid. (1997). *Legislative summary: State Children's Health Insurance Program*. Washington, DC: Kaiser Family Foundation.
- Kaiser Commission on Medicaid and the Uninsured. (1999a). *The Medicaid program at a glance*. Washington, DC: Kaiser Family Foundation.
- Kaiser Commission on Medicaid and the Uninsured. (1999b). *Medicaid: A primer*. Washington, DC: Kaiser Family Foundation.
- Kamerman, S.B. (1999). Child welfare and the under-threes: An overview. *Zero to Three*, 19(3) 3-7.
- Kates, D.A. (1998). Constructing an interagency funding system for Early Intervention Services. *Infants and Young Children*, 11(2), 73-81.
- Knitzer, J., and Page, S. (1998). *Map and track: State initiatives for young children and families*. New York: National Center for Children in Poverty, Columbia University.
- Knowledge Exchange Network. (1999). *Community mental health services block grant program*. Retrieved May 16, 2000 from the World Wide Web: <http://www.mentalhealth.org/publications/allpubs/ken95-0022/ken950022.htm>.
- Koyanagi, C., and Lorber, M. (1997). Can managed care meet the mental health needs of very young children? *Infants and Young Children*, 10(1).
- Mann, T.L. (1997). Promoting the mental health of infants and toddlers in Early Head Start: Responsibilities, partnerships, and supports. *Zero to Three*, 18(2) 37-40.
- Maternal and Child Health Bureau. (1998a). *Overview*. Retrieved May 28, 1998, from the World Wide Web: <http://www.os.dhhs.gov/hrsa/mchb/overview.htm>.
- Maternal and Child Health Bureau. (1998b). *Early intervention for children with special health care needs fact sheet* [WAIS document]. Retrieved May 28, 1998 from the World Wide Web: <http://www.hhs.gov/cgi-bin/waisgate>.

- Maternal and Child Health Bureau. (1998c). *Healthy Start fact sheet*. Washington, DC: Retrieved June 12, 1998, from the World Wide Web: <http://www.hhs.gov:80/hrsa/mchb/healthys.htm>
- Maternal and Child Health Bureau. (2000) *Title V information system's data*. Retrieved April 18, 2000, from the World Wide Web: <http://www.mchdata.net:8080/tvis/Reports...%20Layout7-format=corsch02p.htm&-view>.
- National Advisory Mental Health Council Workgroup. (1998). *Bridging science and service*. Bethesda, MD: National Institutes of Health, National Institute of Mental Health.
- National Association of Homes and Services for Children. (1997). *Title XX Social Services Block Grant* [Issue Briefing]. Retrieved June 10, 1998, from the World Wide Web: <http://www.nahsc.org/advocacy/issues/ibttitle.htm>.
- National Association of Social Workers, Office of Government Relations. (August 27, 1996). *Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (H.R. 3734), Public Law 104-193: Summary of provisions*. Washington, DC: National Association of Social Workers.
- National Center for Policy Analysis. (1995). *Brief analysis: Can managed care solve the Medicaid crisis?* Retrieved April 13, 2000, from the World Wide Web: <http://www.ncpa.org/ba/ba155.html>.
- National Clearing House on Child Abuse and Neglect Information. (1999). *In fact . . . Answers to frequently asked questions on child abuse and neglect*. Retrieved September 29, 1999, from the World Wide Web: <http://www.calib.com/nccanch/pubs/factsheets/infact.htm>.
- National Commission on Children. (1991). *Beyond rhetoric: A new American agenda for children and families, Executive summary*. Washington, DC: Government Printing Office.
- National Education Goals Panel. (1994). *Reconsidering children's early development and learning: Toward common views and vocabulary*. Retrieved January 7, 1999, from the World Wide Web: <http://www.negp.gov/Reports/child-ea.htm>.
- National Institute of Mental Health. (1998). *Priorities for prevention research at NIMH: A report by the National Advisory Mental Health Council Workgroup on mental disorders prevention research*. NIH 98-4321. Bethesda, MD: National Institutes of Health.
- Newacheck, P.W., Halfon, N., Brindis, C.D., and Hughes, D.C. (1998). Evaluating community efforts to decategorize and integrate financing of children's health services. *The Milbank Quarterly*, 76(2), 157-73.
- Office of Special Education Programs, Department of Education. (1998a). *Early education program for children with disabilities*. Retrieved May 28, 1998, from the World Wide Web: <http://www.ed.gov/offices/OSERS/OSEP/PGMS/eeepcd.html>.
- Office of Special Education Programs, Department of Education. (1998b). *Infants and toddlers with disabilities (Part H)*. Retrieved June 3, 1998, from the World Wide Web: <http://www.ed.gov/offices/OSERS/OSEP/PGMS/itd.html>.
- Office of Special Education Programs, Department of Education. (1998c). *What the data show: The positive results of IDEA*. Retrieved June 15, 1998, from the World Wide Web: <http://inet.ed.gov/pubs/OSEP96AnIRpt/chap3a.html>.
- Office of Special Education Programs, Department of Education. (1999). *IDEA '97 project funded activities, fiscal year 1998*. Retrieved April 24, 2000, from the World Wide Web: http://www.ed.gov/offices/OSERS/OSEP/Programs/PFA_Home.html.
- Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services. (1998). *Comparison of prior law and the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 [P.L. 104-193]*. Retrieved June 4, 1998, from the World Wide Web: <http://aspe.os.dhhs.gov/hsp/isp/reform.htm>.

- Pecora, P.J., Whittaker, J.K., Maluccio, A.N., Barth, R.P., and Plotnick, R.D. (1992). *The child welfare challenge: Policy, practice, and research*. New York: Walter de Gruyter.
- Pires, S.A., Armstrong, M.I., and Stroul, B.A. (1999). *Health care reform tracking project: Tracking state health care reforms as they affect children and adolescents with behavioral health disorders and their families: 1997–1998 state survey*. Tampa, FL: Research and Training Center for Children's Mental Health, Department of Child and Family Studies, Division of State and Local Support, Louis de la Parte Florida Mental Health Institute, University of South Florida.
- Rosenbach, M.L., and Gavin, N.I. (1998). Early and periodic screening, diagnosis, and treatment and managed care. *Annual Review of Public Health*, 19, 507–25.
- Rosenbaum, S., Johnson, K., Sonosky, C., Markus, A., and DeGraw, C. (1998). The children's hour: The state children's health insurance program. *Health Affairs*, 17(1), 75–89.
- Sardell, A., and Johnson, K. (1998). The politics of EPSDT policy in the 1990's: Policy entrepreneurs, political streams, and children's health benefits. *The Milbank Quarterly*, 76(2), 175–205.
- Scanlon, W.J. (1999). *Testimony before the Senate Finance Committee, June 17, 1999*. General Accounting Office, Washington, DC. Retrieved April 12, 2000, from the World Wide Web: <http://www.senate.gov/~finance/6-17scan.htm>.
- Schorr, L.B. (1997). *Common purpose: Strengthening families and neighborhoods to rebuild America*. New York: Doubleday.
- Schulzinger, R., McCarthy, J., Meyers, J., Irvine, M., and Vincent, P. (1999). *Health care reform tracking project: Tracking state managed care reforms as they affect children and adolescents with behavioral health disorders and their families*. Child Welfare Managed Care Reform Initiatives, the 1997–1998 State Survey. Washington, DC: National Technical Assistance Center for Children's Mental Health, Georgetown University.
- Shonkoff, J., and Meisels, S.J. (1990). Early childhood intervention: The evolution of a concept. *Handbook of early childhood intervention*. J. Shonkoff and S.J. Meisels, (Eds.). New York: Cambridge University Press.
- Stroul, B.A., Pires, S.A., and Armstrong, M.I. (1998). *Health care reform tracking project: Tracking state managed care reforms as they affect children and adolescents with behavioral health disorders and their families—1997 impact analysis*. Tampa, FL: Research and Training Center for Children's Mental Health, Department of Child and Family Studies, Division of State and Local Support, Louis de la Parte Florida Mental Health Institute, University of South Florida.
- Substance Abuse and Mental Health Services Administration. (1999) *Starting Early Starting Smart Early Childhood Collaboration*. Retrieved September 3, 1999, from the World Wide Web: <http://www.samhsa.gov/grant/primarycare/0709top.htm>.
- Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. No. 97-258, § 1, 96 Stat. 944 (1982).
- Title V, Social Security Act of 1935, §§ 701–709, subchapter V, chapter 7, Title 42.
- The Urban Institute. (1998). *Federal and state funding of children's programs: Executive summary*. Retrieved June 12, 1998, from the World Wide Web: <http://newfederalism.urban.org/html/occ5sum.html>.
- U.S. Department of Agriculture, Food and Nutrition Service. (2000). Child and Adult Food Care Program: Child care operations. Personal communication: SR#2, prepared by USDA/FNS/CND/ PAMB/PAS/JD, March 30, 2000 (Source NDB 5) from CNDINTERNET@fns.usda.gov.

- Waid, M.O. (1998). *Brief summaries of Medicare and Medicaid, Title XVIII and Title XIX of the Social Security Act*. Health Care Financing Administration, DHHS. Retrieved May 16, 2000 from the World Wide Web: <http://www.hcfa.gov/medicare/ormedmed.htm>.
- Yoshikawa, H., and Knitzer, J. (1997). *Lessons from the field: Head Start mental health strategies to meet changing needs, Executive summary*. New York: National Center for Children in Poverty, Columbia University. Retrieved September 20, 1999, from the World Wide Web: <http://cpmcnet.columbia.edu/dept/nccp/lessons.html>.
- Zero to Three, National Center for Clinical Infant Programs. (1992). *Heart Start: The emotional foundations of school readiness, Executive summary*. Arlington, VA: National Center for Clinical Infant Programs.
- Ziegler, M. (1997). *Major changes: Individuals with Disabilities Education Act*. Retrieved June 5, 1998, from the World Wide Web: <http://www.fcsn.org/tapp/idea.htm>.
- Zigler, E.F., Kagan, S.L., and Hall, N.W. (1996). *Children, families, and government: Preparing for the twenty-first century*. New York: Cambridge University Press.

Appendix: Tables

Table 7

Selected Federal Child Health Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Maternal and Child Health Bureau (MCHB), Title V of the Social Security Act
Location in Federal Government	Administered by the Health Resources and Services Administration (HRSA), Public Health Services (PHS), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted 1935.
Program Description and Target Population	Promotes, provides, and ensures the health of mothers, infants, children, and adolescents.
Funding Type	Block grant.
Funding Level	\$681 million (FY 1997).
Risk Factors Addressed	Low birthweight; neurodevelopmental delay; cognitive, learning, and developmental issues; temperament and personality; early behavior and adjustment; nutrition; attachment; problematic parenting practices; low socioeconomic status.
Desired Outcomes	Ensure health for mothers and infants, children, adolescents, and families of low income. Improve health care access for low-income mothers and children.
State Latitude for Implementation	States decide eligibility.
Policy Name	Healthy Start
Location in Federal Government	Administered by Health Resources and Services Administration (HRSA), Public Health Services (PHS), Department of Health and Human Services (DHHS).
Date of Authorization	Began in 1991.
Program Description and Target Population	Provides services to reduce infant mortality and support children (birth to age 3) and mothers through home visiting, universal prenatal screening for medical and psychosocial risk factors, medical services, and family support.
Funding Type	Demonstration program.
Funding Level	\$96 million (FY 1997).
Risk Factors Addressed	Cognitive deficits, child health, nutrition, parent substance abuse and psychopathology, attachment, problematic parenting practices, low birthweight, neurodevelopmental delay, temperament, personality problems, early behavior and adjustment problems.
Desired Outcomes	Prevent infant mortality, support families, improve coping skills and functioning. Enhance positive parenting skills and positive parent-child interaction and promote optimal child development.
State Latitude for Implementation	Participating states decide eligibility.

(Continues on next page)

Table 7 (continued)

Selected Federal Child Health Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Medicaid, Title XIX of the Social Security Act
Location in Federal Government	Administered by Health Care Financing Administration (HCFA), Department of Health and Human Services (DHHS)
Date of Authorization	Enacted 1965
Program Description and Target Population	Provides medical care to certain low-income individuals and families. Medicaid is a jointly funded program between state and federal governments. Services include inpatient and outpatient hospital services, physician services, medical and dental services, early and periodic screening, diagnosis, and treatment (EPSDT), and inpatient psychiatric care for individuals under the age of 21.
Funding Type	The federal government matches state funds between 50% and 83% of total costs depending on the average per capita income of the state.
Funding Level	\$161.2 billion (FY 1997)
Risk Factors Addressed	Low birthweight, neurodevelopmental delay, temperament and personality problems, early behavior and adjustment, parent substance abuse/psychopathology, child maltreatment, low socioeconomic status
Desired Outcomes	Increase access to health care and improve quality of care for low-income children and families.
State Latitude for Implementation	States use their own discretion in determining eligibility within federally imposed restrictions in terms of categorical need and medical need.
Policy Name	Early and Periodic Screening, Diagnosis and Treatment (EPSDT)
Location in Federal Government	Part of Medicaid.
Date of Authorization	Enacted 1967.
Program Description and Target Population	Improves health and welfare of low-income children through required periodic medical, dental, vision, and developmental screening, diagnosis, and treatment of children with medical or behavioral health problems.
Funding Type	Matching funding.
Funding Level	\$467.6 million (FY 1997).
Risk Factors Addressed	Low birthweight, neurodevelopmental delay, child health, temperament and personality, early behavior problems, child maltreatment, attachment issues, low socioeconomic status.
Desired Outcomes	Ensure early and periodic medical, dental, vision, and developmental screening, diagnosis, and treatment for Medicaid eligible children.
State Latitude for Implementation	States are required to provide EPSDT benefits. However, some states may receive waivers.

(Continues on next page)

Table 7 (continued)

Selected Federal Child Health Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	State Children's Health Insurance Program (CHIP), Title XXI of the Social Security Act
Location in Federal Government	Administered by Health Care Financing Administration (HCFA), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted 1997
Program Description and Target Population	Expands health insurance coverage for low-income children, in general, for those children with family incomes below 200% of the federal poverty income guidelines.
Funding Type	Formula grant. Dependent on numbers of families with low income. Higher federal matching payments than Medicaid.
Funding Level	\$20.3 billion 1998–2002 and \$19.4 billion for the next 5 years.
Risk Factors Addressed	Low birthweight, neurodevelopmental delay, child health, temperament and personality, early behavior problems, child maltreatment, attachment issues, low socioeconomic status.
Desired Outcomes	Expand access to health insurance for uninsured children.
State Latitude for Implementation	States determine eligibility within guidelines.
Policy Name	Starting Early Starting Smart
Location in Federal Government	Public/private collaboration between Substance Abuse and Mental Health Services Administration (SAMHSA) and the Casey Family Program with support from Health Resources and Services Administration (HRSA), Administration on Children and Families (ACF), the Department of Education (DOE), and the National Institutes of Health (NIH).
Date of Authorization	Collaboration established in 1997.
Program Description and Target Population	Helps young children from birth to age 7 growing up in low-income families, especially those living in neighborhoods troubled by violence and substance abuse. Integrates mental health services into primary care and child care settings.
Funding Type	Demonstration program.
Funding Level	Undetermined.
Risk Factors Addressed	Problematic parenting practices, neurodevelopmental delay, cognitive deficits and learning problems, temperament and personality dimensions, early behavior and adjustment problems, lack of maternal education, parental substance abuse/psychopathology, child maltreatment, insecure attachment, difficulties with peer relationships, nonmaternal care, relationships with teachers, low socioeconomic status.
Desired Outcomes	Increase access to substance abuse prevention, substance abuse treatment, and mental health services for children from birth to age 7 and their families. Improve service integration, child development and parent-child relationships.
State Latitude for Implementation	The 12 programs are located in different states but are selected at the federal level.

(Continues on next page)

Table 7 (continued)**Selected Federal Child Health Policies Affecting Children's Emotional and Social Development and Readiness for School**

Policy Name	Community Mental Health Services Block Grant Program (CMHSBG)
Location in Federal Government	Administered by the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), and the Department of Health and Human Services (DHHS).
Date of Authorization	Enacted in 1981 as the Alcohol, Substance Abuse and Mental Health Block Grant. Separate Mental Health Block Grant enacted in 1992 [P.L. 102-321].
Program Description and Target Population	It is a joint federal-state partnership that supports existing public services and encourages the development of creative systems of care for adults with serious mental disorders or children with serious emotional disturbance.
Funding Type	Block grant.
Funding Level	\$288 million (FY 1999).
Risk Factors Addressed	Parental psychopathology, insecure attachment, temperament and personality problems, early behavior and adjustment problems.
Desired Outcomes	Provide treatment and rehabilitation for adults with serious mental illness and children with serious emotional disturbance.
State Latitude for Implementation	Block grant administered by the states.

Table 8

Selected Federal Early Childhood Care and Education Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Head Start
Location in Federal Government	Administered by the Head Start Bureau, Administration on Children, Youth, and Families (ACYF), Department of Health and Human Services (DHHS).
Date of Authorization	Originated in 1965 under Economic Opportunity Act of 1994; authorized through 2003 by the Coats Human Services Amendments of 1994.
Program Description and Target Population	Serves over 790,000 children from low-income families (90% at/below poverty) who are less than compulsory school age (60% are 4-year-olds, and 30% are 3-year-olds). Federal standards for health, education, parental involvement, nutrition, and social services.
Funding Type	Discretionary authorization; 80% federal.
Funding Level	\$4.4 billion (FY 1998).
Risk Factors Addressed	Child health, cognitive deficits, temperament and personality, early behavior and adjustment, peer relations, nutrition, low maternal education, problematic parenting practices, insecure attachment, low socioeconomic status, nonmaternal care, relationships with teachers.
Desired Outcomes	To improve the social and learning skills and health and nutrition of low-income children so that they are ready for school.
State Latitude for Implementation	Local implementation within federally-imposed restrictions.
Policy Name	Early Head Start
Location in Federal Government	Administered by the Head Start Bureau, Administration on Children, Youth, and Families (ACYF), Department of Health and Human Services (DHHS).
Date of Authorization	Created with the authorization of Head Start in the Head Start Act amendments of 1994.
Program Description and Target Population	600 community-based programs serving 35,000 low-income children and their families in FY 1999.
Funding Type	Annual appropriation.
Funding Level	\$338 million (FY 1999).
Risk Factors Addressed	Child health, cognitive deficits, temperament and personality, early behavior and adjustment, peer relations, nutrition, low maternal education, problematic parenting practices, insecure attachment, low socioeconomic status, nonmaternal care, relationships with teachers.
Desired Outcomes	To improve child and family development, parenting skills, and community building. To provide a comprehensive program focused on proactive prevention, building on family strengths.
State Latitude for Implementation	Local implementation within federally-imposed restrictions.

(Continues on next page)

Table 8 (continued)

Selected Federal Early Childhood Care and Education Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Child Care and Development Block Grant (CCDBG)
Location in Federal Government	Administered by the Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	PRWORA Title VI, August, 1996, amends Title IV-A of the Social Security Act. CCDBG was created by the Omnibus Budget Reconciliation Act (OBRA) in 1990. CCDBG is currently authorized through FY 2002.
Program Description and Target Population	Subsidizes child care primarily for children under 13 whose parents need child care to engage in work, education, or training; family income must be less than 85% of the state median; provider must meet state/local standards. PRWORA eliminates entitlements to child care and consolidates the three programs of Title IV-A (AFDC, transitional, and at-risk low-income working family child care) into CCDBG.
Funding Type	100% federal. Capped entitlement plus discretionary authorization.
Funding Level	\$3.0 billion (FY 1997); \$2.0 billion in capped mandatory funding; and \$1 billion in a discretionary authorization.
Risk Factors Addressed	Cognitive deficits, peer relations, nonmaternal care, relationships with teachers, temperament, personality problems, early behavior and adjustment problems, low socioeconomic status.
Desired Outcomes	To assure access to child care so parent(s) can work or engage in education or training leading to work.
State Latitude for Implementation	States have wide latitude within goal of getting and keeping parents off public assistance.
Policy Name	Elementary and Secondary Education Act (ESEA), Title I, Part A, Education for the Disadvantaged
Location in Federal Government	Administered by the Department of Education (DOE).
Date of Authorization	Enacted in 1965.
Program Description and Target Population	Improves the teaching and learning of low-income children who face educational barriers, such as children from low-income families with low literacy, the children of migrant agricultural workers, and children who are neglected or delinquent.
Funding Type	Formula grant.
Funding Level	\$8 billion per year for the overall program; primarily serves school age children.
Risk Factors Addressed	Cognitive deficits, nonmaternal care, low socioeconomic status, difficulties with peer relationships, relationships with teachers.
Desired Outcomes	None are specified for preschool services.
State Latitude for Implementation	State and local educational authorities (LEAs) have considerable latitude.

(Continues on next page)

Table 8 (continued)

Selected Federal Early Childhood Care and Education Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Elementary and Secondary Education Act (ESEA), Title I, Part B, The Even Start Family Literacy Program
Location in Federal Government	Administered by the Department of Education (DOE).
Date of Authorization	Enacted in 1989.
Program Description and Target Population	Helps break the cycle of poverty and illiteracy by improving the educational opportunities of the nation's low-income families by integrating early childhood education, adult literacy and basic education, and parenting education into a unified family literacy program. Parents and their children ranging from birth to age 8 comprise the target population.
Funding Type	Formula grant.
Funding Level	\$124 million (FY 1998).
Risk Factors Addressed	Cognitive deficits, temperament and personality problems, early behavior and adjustment problems, low level of maternal education, problematic parenting practices, insecure attachment, difficulties with peer relationships, nonmaternal care, relationships with teachers, low socioeconomic status.
Desired Outcomes	Potential outcomes include improved literacy behaviors, parenting behavior and skills, educational and employment skills, growth in personal skills and community involvement, improved school readiness.
State Latitude for Implementation	States and local entities are given considerable latitude.
Policy Name	Individuals with Disabilities Education Act (IDEA), Part B, The State Grant and Pre-School Grants Programs
Location in Federal Government	Administered by the Office of Special Education Programs, Department of Education (DOE)
Date of Authorization	Enacted in 1986; amended 1997. Originally children over 5 years of age were covered through the Education for All Handicapped Children Act of 1975
Program Description and Target Population	Supports rehabilitation, education, and social services, including family-based services Children from 3–21 years.
Funding Type	Formula grant based on child count.
Funding Level	\$3.8 billion for the State Grant Program and \$0.374 billion for the Pre-School Grants Program (FY 1998).
Risk Factors Addressed	Child health, cognitive deficits, temperament and personality, early behavior and adjustment, peer relations, nonmaternal care, teacher relationships, low socioeconomic status, problematic parenting practices, insecure attachment.
Desired Outcomes	States offer programs for the education of all children with special health care needs, develop strategies for outreach, and offer educational opportunities in the least restrictive environment possible.
State Latitude for Implementation	States must serve all children with special health care needs between the ages of 3 and 21, except for children ages 18–21 if such services are inconsistent with state law, practice, or the order of any court.

(Continues on next page)

Table 8 (continued)

Selected Federal Early Childhood Care and Education Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Individuals with Disabilities Education Act (IDEA), Part C, Infants and Toddlers with Disabilities Program
Location in Federal Government	Administered by the Office of Special Education Programs, Department of Education (DOE).
Date of Authorization	Enacted in 1986; amended 1997.
Program Description and Target Population	Focus is on coordination of services. Covers children birth to 3 years with special health care needs. At state discretion, may be extended to children at risk of developmental delay or other conditions.
Funding Type	Discretionary grant. To be eligible for grant, states must have a state wide system that includes 14 statutory components and a lead agency designated with the responsibility for coordination and administration of funds.
Funding Level	\$350 million (FY 1998).
Risk Factors Addressed	Child health, cognitive deficits, temperament and personality problems, early behavior and adjustment problems, peer relations, nonmaternal care, teacher relationships, problematic parenting practices, insecure attachment, low socioeconomic status.
Desired Outcomes	To provide early intervention for infants and toddlers with special health care needs and their families.
State Latitude for Implementation	States are responsible for ensuring that services are provided to all children birth to 3 years of age with special health care needs. State option whether to include at-risk children.

Table 9

Selected Federal Family Support and Child Welfare Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Family and Medical Leave Act (FMLA)
Location in Federal Government	Administered by the Employment Standards Administration, Wage and Hour Division, Department of Labor.
Date of Authorization	Enacted in 1993.
Program Description and Target Population	Entitles employees of certain employers to take up to 12 weeks of unpaid, job protected leave for certain reasons.
Funding Type	No government funding.
Funding Level	Not applicable.
Risk Factors Addressed	Insecure attachment, neurodevelopmental delay, other medical problems.
Desired Outcomes	Unspecified.
State Latitude for Implementation	State laws may expand on FMLA and provide a more generous benefit.
Policy Name	Child Welfare Services, Title IV-B of the Social Security Act
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Originated in 1935 as Title IV; changed to Title IV-B in 1967. Amended in 1996.
Program Description and Target Population	Provides funding for child welfare services including screening, investigation, and treatment of child abuse and neglect.
Funding Type	75% federal matching grants to states.
Funding Level	\$292 million (FY 1998).
Risk Factors Addressed	Temperament and personality problems, early behavior and adjustment problems, problematic parenting, child maltreatment, insecure attachment.
Desired Outcomes	Improve the care and protection of children.
State Latitude for Implementation	State latitude; however, states must respond to requirements in The Child Abuse Prevention and Treatment Act (CAPTA).
Policy Name	Promoting Safe and Stable Families, Title IV-B of the Social Security Act
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Original program authorized in 1993. Reauthorized under current name in 1997.
Program Description and Target Population	Provides state grants for family support and preservation programs, as well as reunification services and adoption promotion.
Funding Type	Federal grants to states.
Funding Level	\$275 million (FY 1999).
Risk Factors Addressed	Low birthweight, temperament, personality problems, early behavior and adjustment problems, nonmaternal care, problematic parenting, parental substance abuse and psychopathology, child maltreatment, insecure attachment.
Desired Outcomes	Prevent abuse and neglect, prevent foster care placement, reunite families, support adoption.
State Latitude for Implementation	State latitude; however, states must meet program requirements. States determine the use of these funds.

(Continues on next page)

Table 9 (continued)

Selected Federal Family Support and Child Welfare Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Child Abuse Prevention and Treatment Act (CAPTA)
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted 1974.
Program Description and Target Population	Provides funds and technical assistance to states for prevention and intervention in cases of child abuse and neglect. Grants fund statewide networks of local child abuse and neglect prevention and family resource programs.
Funding Type	Formula grants.
Funding Level	\$166 million (FY 1997).
Risk Factors Addressed	Low birthweight and neurodevelopmental delay, other medical problems, temperament and personality problems, early behavior and adjustment problems, parental substance abuse/psychopathology, child maltreatment, insecure attachment.
Desired Outcomes	Prevention and intervention in cases of child abuse and neglect.
State Latitude for Implementation	States use their own discretion regarding how to allocate federal funds for programs.
Policy Name	Social Services Block Grant (SSBG), Title XX of the Social Security Act
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted in 1975; authorized for \$2.8 billion annually; amended by Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) to \$2.38 billion for FY 1997–FY 2002.
Program Description and Target Population	Provides a variety of services to support families and children, including child care, child protection, home-based services, counseling, and health-related services.
Funding Type	Block grant.
Funding Level	\$2.5 billion appropriated (FY 1997), reduced to \$1.78 billion appropriation in FY2000
Risk Factors Addressed	Cognitive and developmental issues, temperament and personality, early behavior and adjustment, parental substance abuse/psychopathology, child maltreatment, attachment issues, problems with peers, nonmaternal care, low socioeconomic status, relationships with teachers, problematic parenting practices.
Desired Outcomes	Improve self-sufficiency and reduce dependency, prevent abuse and neglect, reunite families, prevent inappropriate institutional care and secure institutional care when other forms of care are inappropriate.
State Latitude for Implementation	State implementation with substantial latitude.

(Continues on next page)

Table 9 (continued)

Selected Federal Family Support and Child Welfare Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Title IV-E of the Social Security Act
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted in 1980.
Program Description and Target Population	Funds states to provide foster care and adoption services.
Funding Type	Open-ended entitlement with incentives to reduce length of time children are in foster care.
Funding Level	\$3.2 billion for foster care; \$701 million for adoption assistance (FY 1998).
Risk Factors Addressed	Temperament and personality, early behavior and adjustment, problematic parenting, child maltreatment, attachment problems, low socioeconomic status.
Desired Outcomes	Safe out-of-home care, permanent homes for children.
State Latitude for Implementation	State implementation with substantial latitude.
Policy Name	Adoption and Safe Families Act
Location in Federal Government	Administered by Administration for Children and Families (ACF), Department of Health and Human Services (DHHS).
Date of Authorization	Enacted in 1997.
Program Description and Target Population	Law emphasizes the need for child safety, permanence, well-being. It speeds up both the termination of parental rights and adoption processes.
Funding Type	Formula grant.
Funding Level	\$275 million (FY 1999).
Risk Factors Addressed	Temperament and personality, early behavior and adjustment, problematic parenting, child maltreatment, attachment problems, low socioeconomic status.
Desired Outcomes	Reduce child abuse/neglect at home and in foster care, increase permanency for children, reduce time in foster care, increase placement stability, and reduce placements in group homes/institutions.
State Latitude for Implementation	State implementation; however, states must comply with requirements in the law.

Table 10

Selected Federal Nutrition Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Food Stamp Program
Location in Federal Government	Administered by Food and Nutrition Service, Department of Agriculture.
Date of Authorization	Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) Title VIII 1996 amends Food Stamp Act originally enacted in 1972 and the Food Security Act of 1985. Public Law 105-185, enacted in 1998, amends PRWORA.
Program Description and Target Population	Provides food vouchers to 19.8 million low-income participants. PRWORA increases state flexibility, strengthens work and other non-income eligibility requirements, makes non-citizens ineligible, controls spending, and strengthens anti-fraud and enforcement measures.
Funding Type	100% federal annual appropriation.
Funding Level	\$20.1 billion (FY 1998).
Risk Factors Addressed	Nutrition, low socioeconomic status.
Desired Outcomes	Improve the nutrition of people with low incomes as well as to increase food purchasing power of eligible low-income households.
State Latitude for Implementation	State implementation with some latitude.
Policy Name	Special Supplemental Nutrition Program for Women, Infants and Children
Location in Federal Government	Administered by Program for Women, Infants and Children (WIC), Food and Nutrition Service, Department of Agriculture.
Date of Authorization	Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) Title VII 1996 amends Supplemental Food Program for Women, Infants and Children (WIC), originally enacted in 1972.
Program Description and Target Population	7.2 million low-income children, infants, and women receive monthly vouchers for nutritious foods (FY 1996).
Funding Type	100% federal annual appropriation.
Funding Level	\$3.9 billion (FY 1998).
Risk Factors Addressed	Nutrition, low socioeconomic status.
Desired Outcomes	Provide healthy food to meet the nutritional requirements of infants, children, and pregnant or breastfeeding women in low-income households.
State Latitude for Implementation	State implementation with little latitude.

(Continues on next page)

Table 10 (continued)

Selected Federal Nutrition Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Child and Adult Care Food Program (CACFP)
Location in Federal Government	Administered by Food and Nutrition Service, Department of Agriculture.
Date of Authorization	Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) Title VII 1996. Amends the National School Lunch Act of 1946. CACFP is permanently authorized under section 17 of the National School Lunch Act.
Program Description and Target Population	Subsidizes food provided by child care providers who meet state/local standards. The majority of children served are between 3 and 6 years of age; however, children up to age 12 and certain special older groups are eligible. PRWORA imposes requirements that the provider, location, or child's family be low-income to be eligible. In FY 1998, average daily attendance in CACFP subsidized centers and homes totaled 2.5 million children.
Funding Type	100% federal authorized entitlement.
Funding Level	\$1.3 billion (FY 1998).
Risk Factors Addressed	Nutrition, low socioeconomic status.
Desired Outcomes	Improve nutrition through subsidized breakfasts, lunches, suppers, and snacks that meet federal nutrition standards and are served in nonresidential child care.
State Latitude for Implementation	State implementation with little latitude.

Table 11

Selected Federal Socioeconomic Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Temporary Assistance for Needy Families (TANF)
Location in Federal Government	Administered by the Office of Family Assistance, Administration on Children, Youth, and Families (ACYF), Department of Health and Human Services (DHHS).
Date of Authorization	Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) Title I 1996.
Program Description and Target Population	Contingent cash welfare benefits; 5 year limit, after 2 years requires work; eliminates eligibility for noncitizens. Incentives to states to reduce nonmarital births and single-parent households; restrictions on teen parents. Replaces Aid to Families with Dependent Children (AFDC) and Job Opportunities and Basic Skills Training (JOBS) programs.
Funding Type	Block grants.
Funding Level	\$16.5 billion annually through FY 2002.
Risk Factors Addressed	Low socioeconomic status, family composition, immigrant status, low maternal education.
Desired Outcomes	Provide a safety net while encouraging work, marriage, and two-parent families.
State Latitude for Implementation	States have substantial flexibility and may be more stringent than the federal law.
Policy Name	Supplemental Security Income (SSI)
Location in Federal Government	Administered by the Social Security Administration (SSA).
Date of Authorization	Authorized in 1972. Amended by Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) Title II 1996.
Program Description and Target Population	Cash benefit; 6.6 million recipients, including 958,000 disabled children under 18 years (1998); PRWORA eliminates the Individualized Functional Assessment and "maladaptive behavior" eligibility criteria for children.
Funding Type	100% federal cash benefit to recipients.
Funding Level	\$27.3 billion (FY 1998).
Risk Factors Addressed	Low birthweight, neurodevelopmental delay, other medical problems, temperament and personality, early behavior and adjustment problems, parental psychopathology, low socioeconomic status.
Desired Outcomes	Assist low-income families to care for an individual with a disability.
State Latitude for Implementation	Little state flexibility.

(Continues on next page)

Table 11 (continued)

Selected Federal Socioeconomic Policies Affecting Children's Emotional and Social Development and Readiness for School

Policy Name	Earned Income Tax Credit (EITC)
Location in Federal Government	Administered by the Internal Revenue Service (IRS), Department of the Treasury.
Date of Authorization	Enacted in 1975. Indexed to inflation in 1987.
Program Description and Target Population	Refundable tax credit primarily for families with children under 19 years. Maximum credit is \$2,210 with one child and \$3,656 with more than one. Phase-out of credit begins at income of \$11,930; ends under \$30,000. Claimed by 19.4 million tax payers in 1997; more than 70% are single heads of households.
Funding Type	Federal income tax credit. Mirrored by some states.
Funding Level	\$30.4 billion in benefits (1997).
Risk Factors Addressed	Low socioeconomic status.
Desired Outcomes	Improve the socioeconomic status of low-income working families.
State Latitude for Implementation	None, except that some states have mirrored the federal tax credit in their own income tax codes.
Policy Name	Dependent Care Tax Credit (DCTC)
Location in Federal Government	Administered by the Internal Revenue Service (IRS), Department of the Treasury.
Date of Authorization	Deduction created in 1954; became a nonrefundable tax credit in the Tax Reform Act of 1976 with expanded eligibility. The Family Support Act of 1988 tightened eligibility.
Program Description and Target Population	Nonrefundable tax credit for work-related expenses for care of dependent. Claimed on 5.8 million tax returns (1997) by working caregivers for children under 13 or incapacitated dependents. Average credit is \$425 per return. 10% of benefit to families with incomes below \$20,000; 48% to those with incomes above \$50,000.
Funding Type	Federal income tax credit.
Funding Level	Approximately \$2.5 billion in benefits (1997).
Risk Factors Addressed	Low socioeconomic status, nonmaternal care.
Desired Outcomes	Tax cut linked to expenses for dependent care.
State Latitude for Implementation	None.



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